Freedom of Word Order and Domains for Movement:

A flexible syntax of Hungarian

Akadémiai
Doktori Értekezés

Surányi Balázs

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1 Introduction

Broadly speaking, the present monograph seeks to contribute to the investigation of two complementary but interrelated themes in the study of natural language syntax, examining them in the context of the current minimalist research program (MP) of transformational generative grammar (TGG). These are: (i) the analysis of apparently free word order alternations, and (ii) the account of word order restrictions. Naturally, the particular research questions I attend to in this work are only specific aspects of these immense and formidable themes, without doubt as old as the study of language itself. In this first chapter I spell out the research questions the rest of the dissertation undertakes to investigate, situating them and highlighting their special significance in the context of the current minimalist program of TGG, initiated by Chomsky (1993).

I begin by laying out the theoretical framework in which the research is conducted, and within which the particular issues that I investigate arise (Section 2; this section can be readily skipped by readers familiar with the minimalist incarnation of the Principles and Parameters approach). I then formulate the research questions posed by the dissertation and outline their immediate background (Section 3). The last section of the chapter, Section 4, provides a roadmap for the volume.

2 The framework

2.1 Principles and Parameters

The so-called Principles and Parameters (P&P) Theory has been the prevailing approach to natural language syntax within transformational generative grammar since the beginning of the 1980s. According to the P&P theory, the initial, innate state of the human faculty of language FL_0 is characterized as a finite set of general principles complemented by a finite set

of variable options, dubbed parameters. These principles and parameters together constitute a Universal Grammar (UG), a model of FL_0. FL_0 functions as a Language Acquisition Device: it imposes severe constraints on attainable languages, thereby facilitating the process of language acquisition, the core of which lies in fixing the open parameter values of FL_0. On this view, competence in a given language is the result of a particular specification of the parameters of FL_0 (called parameter-setting), which determine the range of possible variation among languages.

Interpreted broadly, the P&P framework can be seen as a general model of the interaction of "nature" and "nurture" (genetic endowment and experience) in the development of any module of human cognition. Accordingly, it has come to be applied beyond syntax both inside and outside linguistics. An example of the former case is the theory of phonology called Government Phonology (see Kaye 1989), and an instance of the latter is a recently emerging principles and parameters based approach to moral psychology (see Hauser 2006, and references therein). In the domain of natural language syntax, the P&P framework subsumes both Government and Binding (GB) theory as well as its more recent development called the Minimalist Program, or linguistic minimalism (even though the term is often, and confusingly, used narrowly to refer to the former GB model only).

The P&P framework crystallized by the end of the 1970s as a way to resolve the tension between two goals of generative grammar. One objective was to construct descriptively adequate grammars of individual languages, while another was to address the logical problem of language acquisition (viz. the issue how it is possible to come to know so much being exposed to so little evidence) by working out a theory of UG that constrains possible grammars to a sufficiently narrow range, so that the determination of the grammar of the language being acquired from the Primary Linguistic Data can become realistic (this latter objective is referred to as explanatory adequacy). The two goals clearly pull in opposing directions: the former seems to call for allowing complex rules and a considerable degree of variation across grammars (a liberal UG), while the latter requires that possible grammatical rules be as constrained as possible (a restrictive UG).

The research program that culminated in P&P theory aimed to approximate these twin goals by establishing in what ways grammatical rules can and should be restricted, extracting from them properties that seemed to be stable across constructions and languages, and formulating them as constraints imposed by UG on the format of rules of individual grammars. Uncovering, generalizing and unifying such constraints eliminated from rules general conditions on their operation, which made it possible for rules themselves to be

considerably simplified. For instance, the transformational rule that forms *wh*-interrogatives, the rule of relativization producing relative clauses, the rule of topicalization, and several others, each corresponding roughly to some construction recognized by traditional grammars, share certain notable properties. Chomsky (1977) argued that instead of stating such properties as part of each of these rules, some of them should be incorporated into UG, while others should be ascribed to the generalized rule dubbed *Front-Wh*, which each of the individual rules is an instantiation of. The furthest such a "factoring out and unification" strategy can potentially lead to is a model of language where rules (as well as the corresponding constructions of traditional grammar) are eliminated altogether from the theory as epiphenomena deducible from the complex interaction of the general principles of UG. This is precisely the approach that the P&P framework has been pursuing.

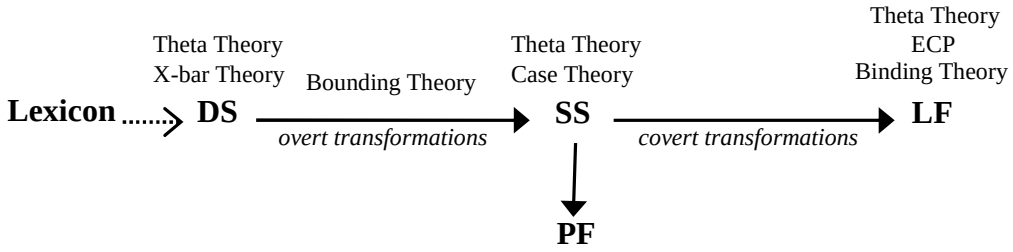
In the Government and Binding model of the P&P approach (Chomsky 1981), principles of UG are organized into modules, or subtheories. Such modules include X-bar theory, which constrains possible phrase structure configurations, and Theta Theory, which determines a bi-unique mapping between the lexically specified theta-role (thematic role) bearing arguments of a predicate and the syntactic base positions they occupy. As for structures derived by transformations, movement rules are reduced to a single and maximally general operation *Move α* that can move anything anywhere. Representational filters then limit the application of Move α. One central such filter is the Empty Category Principle (ECP) which demands that traces of movement be licensed under a local structural relation called government. Another module of syntax, Bounding Theory, places an absolute upper bound on how far movement can take an element. Apart from the ECP and Bounding Theory, various other modules of UG, not narrowly geared to cut down the overgeneration of structures resulting from Move α, act to filter the output representations produced by movements. Case Theory, for instance, requires that (phonetically overt) NPs occupy a position at Surface Structure in which they are assigned Case. The three principles of Binding Theory (which constrain the distribution of anaphoric, pronominal, and referential NPs, respectively, relative to potential antecedents they can/cannot be coreferential with) are sensitive to the binary [±anaphoric] and [±pronominal] features of NP categories generally, including phonetically empty NPs like various types of traces and null pronouns.

This brief list serves to illustrate the modular organization of the P&P theory, i.e., the dissociation of various aspects of syntactic phenomena for the purposes of the grammar. It is this modular organization that makes it possible to keep principles of UG maximally simple. The cohesion of each module is supplied by some notion and/or formal relation that its

principles are centered around. The whole of the grammatical system is also characterized by unifying concepts, most notably the notion of government, which plays a key role in a variety of modules. The components interact in complex ways to restrict the massive overgeneration of syntactic expressions that would otherwise result from the fundamental freedom of possible basic phrase structures and transformations applied to them, which ultimately yields the actual set of well-formed expressions.

The modularity of the different (sets of) principles is due not only to the dissociation of the properties relevant to them, but also to the stipulation of distinctions with regard to where in the grammar they apply. According to GB theory, each sentence corresponds to a sequence of representations, starting from D-structure (or Deep Structure, DS), proceeding through S-structure (or Surface Structure, SS) to the final representation called Logical Form (LF), where adjacent representations are related by transformations. The derivation from DS to SS feeds phonetic realization, in particular the mapping from SS to Phonetic Form (PF) (it is *overt*), whereas the derivation from SS to LF does not (it is *covert*). A principle can apply to transformations (like Bounding Theory), or to one or more of the three syntactic representational levels DS, SS and LF (these are the constraints that I have referred to as *filters*), though not to any intermediate representation. (1) depicts this so-called Y- or T-model of GB, tagged to indicate where the most prominent modules apply.

(1)



UG, as a model of language competence, includes the principles along with the locus of their application, as well as the primitive syntactic objects (e.g., labels distinguishing full phrases, heads of phrases, and intermediate level categories), relations (e.g., c-command, dominance, government) and operations (e.g., movement, deletion) that collectively define the syntactic expressions. Cross-linguistic variation, according to GB theory, is rather limited. An obvious element of variation involves the identity and properties of lexical items (referred to collectively as the Lexicon). Apart from acquiring a Lexicon, the primary means of grammar acquisition and the key source of cross-linguistic differences is the inference of underspecified aspects of UG principles, i.e., the setting of open parameters. Parametric principles are an innovation to allow the model to furnish descriptively adequate—because

suitably different—grammars for individual languages. To provide a realistic account of language acquisition, a process that is fairly uniform and remarkably effective both across speakers and across languages, the number of parameters to be fixed must be reasonably low, the parameter values permitted by UG must be limited to relatively few, and the cues in the Primary Linguistic Data that can trigger their values must be sufficiently easy to detect. Due to their rich deductive structure, a distinct advantage of parameterized principles over language- and construction-specific rules is that the setting of a single parameter can potentially account for a whole cluster of syntactic properties, thereby contributing to a plausible explanation for the outstanding efficiency of the process of language acquisition itself. Such parameters are often referred to as macro-parameters.

Parameters range from macro-parameters like the so-called null subject parameter, putatively responsible for a whole cluster of properties, to micro-parameters whose scope is comparatively narrow. One micro-parameter, for instance, is the parameter determining whether or not the (finite) main verb raises out of the VP before S-structure to a position above VP-adverbs or clausal negation (the *verb raising parameter*). Another dimension along which parameters differ is how many options, i.e., parameter settings, are allowed for. Most parameters are binary, but proposals have been made for parameters with more options: for instance, the choice of the *Local Domain* in which anaphors must find an appropriate antecedent (according to Principle A of Binding Theory). Binary parameters include the choice of the "timing" of a movement transformation with respect to S-structure (either overt or covert, see (1)). Finally, while some parameters are simply underspecified aspects of UG principles, others are grammatical properties of (classes) of lexical items. The *Head Directionality Parameter* (set as *head-initial* for English where verbs, nouns, adjectives and adpositions precede their complements, and *head-final* for Japanese, where they follow them) belongs to the first of these two types, while variation in terms of which lexical items are lexically [+anaphoric], exemplify the second.

2.2 The Minimalist Program

The P&P framework inspired a vast amount of research on similarities and differences across languages, as well as on language acquisition, which has produced an impressive array of novel discoveries, and analyses that are both attractively elaborate in terms of data coverage and at the same time genuinely illuminating as regards the explanations they offer. That said, in pursuit of the twin objectives of descriptive and explanatory adequacy some of the basic notions and principles became increasingly non-natural and complex (like government and the

ECP, or the notion of Local Domain in Binding Theory). This gave cause for growing concern in the field, in no small part because the question of why UG is the way it is became disappointingly elusive. The ultimate source of the emergent complexities, beyond the strive for ever-improving empirical coverage, was the fact that GB lacked an actual theory of possible principles or, for that matter, of possible parameters. As for the latter, continued in-depth research on cross-linguistic variation has shown many of the macro-parameters, among them the null subject parameter, to be unsustainable in the strong form they were originally proposed: several of the linguistic properties correlated by macro-parameters turned out to be cross-linguistically dissociable. Even though the idea of parametric linguistic variation was upheld, parameters themselves needed to be scaled down. In addition, as GB relied on massive overgeneration resulting from the fundamental freedom of basic phrase structure and transformations, downsized by declarative constraints imposed (mainly) on syntactic representations, the computational viability of the model was often called into question.

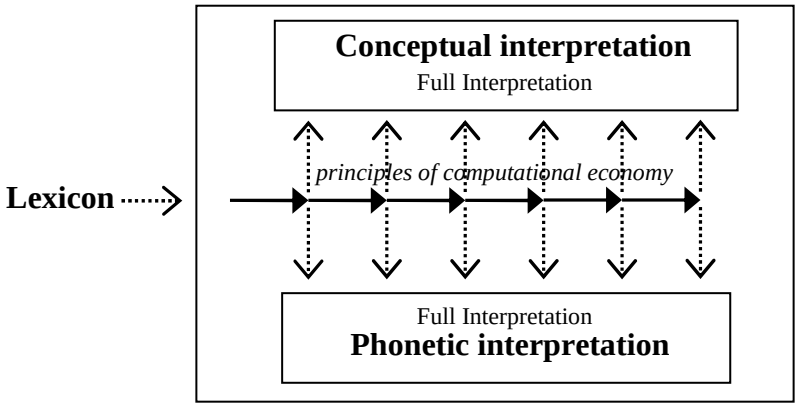
The current minimalist research program (MP), initiated by Chomsky in the early 1990s (see Chomsky 1993, 1995), while building on the achievements of GB theory, departs from it in various important ways. It re-focuses attention on the shape of UG itself as a model of the innate faculty of language FL, a computational-representational module of human cognition, as well as on the way it interfaces with articulatory-phonetic and conceptual-intentional external systems, dubbed PHON and SEM in throughout present dissertation. The MP adopts the substantive hypothesis (called *Full Interpretation*) that representations that the FL feeds to the external interface systems are fully interpretable by those components, with all uninterpretable aspects of the representations eliminated internally to FL. As for the shape of UG as a computational system, the MP puts forward the substantive hypothesis that FL is computationally efficient: it incurs minimal operational complexity in the construction of representations fully interpretable by the interface systems. Syntactic operations like movement apply only if they are triggered: a principle of computational economy called *Last Resort.* On a narrow interpretation of the notion, this condition is satisfied only if the movement must be carried out in order to satisfy Full Interpretation by eliminating some uninterpretable property in the syntactic expression under computation. If there is more than one way a derivation can satisfy Full Interpretation, the least complex (set of) operation(s) is selected by FL: the principle of *Least Effort* (which, however, can be reduced to Last Resort if appropriately construed).

On the methodological side, the MP proposes to apply Ockham's razor (= Occam's razor) considerations of theoretical parsimony to UG as rigorously as possible. All syntax-

internal principles constraining representations are disposed of, thereby eliminating syntax-internal *representational levels*, including S-structure and D-structure. The incremental structure building operation *Merge* starts out from lexical items, combining them recursively into successively larger syntactic units. Empirical properties formerly captured at D-structure and S-structure are accounted for by shifting the burden of explanation to Full Interpretation at the interface levels of PF and LF, and to principles of economy of derivation, the only principles operational in UG. Economy principles have no built-in parameters: all "parametric" differences across languages are confined to the domain of lexical properties, an irreducible locus of variation, to which, accordingly, the acquisition of syntax is reduced. For instance, word order variation previously put down to the Head Directionality Parameter (see the previous subsection) is typically attributed to movement operations: movements can occur either in overt or in covert syntax, and they can affect smaller or larger units of structure, these choices being a function of uninterpretable lexical properties of participating elements.

Non-naturally complex notions and relations (including government) are also eliminated from UG. A syntactic expression is taken to be a plain set (of sets of sets etc.) of lexical items, produced by recursive applications of Merge: nothing beyond that is added in the course of the derivation. It follows from this simplifying proposal (called *Inclusiveness*) that syntactic expressions include no indices (to link a moved element to its trace, or a binder to its bindee), no traces (but silent copies of the moved elements themselves), no syntactic label for "phrase" or "head" status, and perhaps no labels borne by complex syntactic units at all. The two stipulative assumptions of the GB model that all overt movements precede all covert movements, and that transfer to phonological and conceptual interpretation can only take place at a unique point in the derivation are also dropped. This yields a model that has overt and covert movements intermingled (applying them as soon as their respective trigger is Merged in), and that has multiple transfers (derivational sequences between two transfer points are called *phases*). The basic architecture is shown in (2):

(2) The architecture of the MP (Chomsky 2001, 2005)



Finally, grammatical components are reduced as well. First of all, there are no distinct phrase structure and transformational components, as both basic phrase structure and movements are brought about by the operation Merge: while basic structure building involves Merging two distinct elements, movement involves (re-)Merging an element with a constituent that contains it (see esp. Chomsky 2004). In addition, the burden of description carried by modules of GB is partly reallocated to syntax-external components, and is partly redistributed among the residual factors that can enter syntactic explanation: the principal constraint imposed by the interface components (Full Interpretation), the character of the syntactic derivation (multiple transfers, principles of computational economy, the nature of basic syntactic operations etc.), and the properties of lexical items. For instance, much of the Binding Theory of UG is reduced to movement operations and rules of interpretation, Case Theory is recast in more general terms and is subsumed in a broader account of triggers for movements (called *checking theory*), and Bounding Theory is essentially deduced from the "multiple transfers" nature of the derivation.

A repercussion of relegating parameters to the Lexicon, and of eliminating some modules of syntax and reducing the capacity of others, is that languages, i.e., grammars of natural languages, have radically fewer ways in which they can differ from each other than before. Indeed the working assumption of the MP, which it takes to be the null hypothesis, the hypothesis to be adopted in the absence of sufficient evidence to the contrary, is that grammars of languages (where grammar is interpreted narrowly as syntax) are fundamentally uniform (call this the Uniformity of Grammars hypothesis).

The fundamental question pursued by the P&P framework is whether it is possible to construct an explanatorily adequate theory of natural language grammar based on general principles. Two further ambitions of P&P, gaining prominence with the advent of its

minimalist research program, are to find out whether the primitive notions and principles of such a model are characterized by a certain degree of naturalness, simplicity and non-redundancy, and concurrently, whether some properties of the language faculty can be explained in terms of "design" considerations pertaining to computational cognitive subsystems in general, such as the optimization of the use of computational resources in terms of the computational complexity incurred, and the efficient interaction of the subsystems themselves; or in the long run even more broadly, in terms of the laws of nature. Should it turn out that the answers to these questions are in the positive (as some initial results suggest), that would be a surprising empirical discovery about an apparently complex *biological* subsystem (cf. also the not-so-recent term 'biolinguistics'): in the case at hand, the human language faculty. The exploration of the ways general laws of nature might enter linguistic explanation is only currently taking place within the P&P framework; there is no doubt that most of this work lies ahead.

3 Background and objectives

Within this broadly defined context of the MP, the particular research questions the present monograph investigates concern three related outstanding aspects of the approach. I begin this part by laying out the background against which I then formulate the three (families of) questions that concern these three aspects, respectively.

3.1 The role of feature checking and Last Resort

A basic working hypothesis of the MP, as pointed out in the preceding section, is that operations, including displacement, are heavily constrained. Their constrained nature comes from a fundamental principle of the economy of computation, dubbed *Last Resort*, which dictates that no operation should take place unless it is properly 'triggered.' On the other hand, if an operation is triggered, then it *must* take place.

Needless to say, for such a hypothesis to hold any water a proper theory of triggers is required. In line with its quest for reducing syntax itself to its bare minimum, the MP conjectures that triggers should be extra-syntactic (see Section 2 above). Notwithstanding this ideal, until recently the majority of triggers have been formulated practically (although not technically) as intra-syntactic requirements of structurally local agreement between pairs of syntactic elements (called 'feature checking'). In particular, the assumption has been that syntax-external interface components of meaning and/or of sound (SEM and PHON, for short) requires the representations that syntax transfers to them as their input to be fully

interpretable for their own purposes (the principle of Full Interpretability), and that certain elements, or more precisely their relevant features, remain uninterpretable for SEM and/or PHON unless they enter local agreement within syntax with another, matching interpretable feature of some other element.

Taken together, these assumptions point to the conclusion that if a syntactic displacement (a movement transformation) takes place in order to establish a local agreement (feature checking) relation between two elements, which subserves Full Interpretability at the interfaces, then that displacement does not qualify as optional; i.e, the apparent word order alternation that its occurrence and its non-occurrence give rise to is not free: when the relevant uninterpretable feature is present, it is obligatory (to satisfy Full Interpretation), and when it is absent, it is prohibited (by Last Resort). For instance, the movement of an argument expression to the canonical subject position in languages like English is triggered to establish local morphosyntactic agreement between the *un*interpretable number and person (aka phi-) features of the (syntactically independent) agreement/tense morpheme of the inflected verb and the matching interpretable number and person features of the subject; being triggered, this movement is obligatory. As the verb has (uninterpretable) phi-features in all finite clauses of English, movement to the canonical subject position is obligatory in all finite clauses. *Wh*-movement differs from this scenario: *wh*-movement takes place only in (genuine) questions, whose (silent) complementizer C (taken to be present in the left periphery of all main clauses) is assumed to bear an uninterpretable [wh] feature. The [wh] feature of C and the matching *wh*-feature inherent in the *wh*-element must undergo local feature-checking to eliminate the uninterpretability, which need triggers the movement of the *wh*-element to a position next to C. When C bears [wh], then (there must be a *wh*-element in the sentence and) the *wh*-element must move to C. When C does not bear [wh], the *wh*-element does not undergo movement, and we don't have a genuine question (or there is no *wh*-element in the sentence at all).[1] Here we have an example of a word order alternation (fronted versus *in situ wh*-element) that correlates with the presence versus absence of a formal feature (viz., [wh]). The alternation is only apparently free.

Notice that even though Full Interpretation is an extra-syntactic requirement, in line with basic minimalist methodology, but at the same time agreement takes place in, and is conditioned by, narrow syntactic structure, i.e., internal to syntax. This makes it possible to extend the mechanism to virtually any apparently optional movement transformation, including displacements like topicalization or focusing, which are characteristically (though not universally) not correlated with morphosyntactic agreement at all. Agreement between

abstract, i.e., morphologically null, features can always be postulated as a trigger, to make up for the apparent lack thereof. Accordingly, pairs of agreeing uninterpretable and interpretable abstract morphosyntactic features like [top(ic)] and [foc(us)] have been posited by analysts of pertinent constructions in different languages, conforming in this manner to the working hypothesis of the MP that all (displacement) operations are triggered. But such an implementation of the notion of trigger is methodologically unsound, since, while it applies the same mechanism of trigger throughout, it substantially weakens the predictive power of the hypothesis itself (the general prediction being that all movements are triggered), to the degree that makes the argumentation almost circular.

Taking topicalization as in (3) as an example, and still keeping to English, the problem is that first, topics do not morphosyntactically form a natural class, and there is no overt morphosyntactic marker on (the silent matrix or the potentially overt embedded) complementizer C that would correspond to the uninterpretable [top] feature there; and second, an expression cannot be a interpreted as a topic (in the sense illustrated in (3)) if it is not fronted, i.e., there does not seem to be an interpretable property of the expression undergoing topicalization that would make it semantically a topic independently of its movement.

(3) John, I like

In other words, there is neither a morphosyntactic nor a semantic property that could be pointed at as independent evidence for the postulation of the [top]-feature-checking mechanism at issue. We can still posit a pair of [top]-features undergoing feature checking in (3), merely on account of the fact that *John* is interpreted as a topic.

As long as the moved element is interpreted differently in its landing site than in its extraction site (and this condition is the reason why the argumentation is only *almost* circular), the element undergoing movement can be analyzed as possessing some interpretable feature responsible for the relevant different interpretation; the uninterpretable counterpart of this feature can then be associated with the landing site position to trigger the movement. A result is that in such cases the word order alternation the movement at issue gives rise to is not free, as when the relevant feature is present, the displacement must take place. Given the unwieldiness of the postulation of such uninterpretable features, no particular insight is gained into the nature of the movements that such discourse-related uninterpretable features are used to model. The predictive power of the postulation of Last Resort as a principle is rather weak

in this setup. Note that Last Resort is in principle a strong constraint on movements—it is only its formulation in terms of Full Interpretation at the interfaces, which in its turn is understood as the requirement to be free of uninterpretable morphosyntactic features, that makes it lose most of its force.

The feature [q(uant)] (for quantificationality), employed in some analyses to trigger the movement of generalized quantifiers (GQ), is a prime illustration of an even more serious issue. Assume that the movement of GQs is obligatory and semantically significant, in line with May's (1977, 1985) Quantifier Raising approach. The obligatoriness of the raising of GQs can be derived on the assumption that they are not interpretable *in situ* due to a semantic type conflict (e.g., Heim and Kratzer 1998). On the q(uant)-feature-based approach, the movement of GQs is triggered in syntax by the uninterpretability of the q(uant)-feature on some functional head at the landing site, similarly to any other movement. The specific nature of GQ-raising (involving semantic type-conflict resolution) is effectively masked by such a feature-checking account. In particular, it is obscured that GQs are interpretable only in certain syntactic positions: i.e., the interpretability of their q(uant)-feature is not an absolute property of GQs, independent of syntactic context (in contrast to the interpretability of phi-features of a DP, which does not depend on the syntactic context of the DP).

It is easy to spot the redundancy in such an approach. A GQ must be moved, say, out of its object position in order to be interpretable. Its movement serves Full Interpretability, as otherwise the representation transferred to SEM would be uninterpretable there. Therefore Quantifier Raising of the GQ satisfies Last Resort. It is redundant to require the GQ to also enter feature checking with an uninterpretable [q(uant)] feature.

3.2 The role of syntactic templates

The contemporary mainstream of TGG conceptualizes much of syntactic structure itself in terms of more or less fixed, highly articulated hierarchical syntactic templates ST of absolute positions (hierarchies of so-called functional projections), which positions may or may not be filled by elements in any given sentence. It views word order alternations arising from the displacement of a given element E as being due to the requirement to bring E to some specific position within ST that is distinct from the original (or base) position of E and that in some well-defined sense matches properties of E. Mostly, this matching takes the form of agreement, i.e., morphosyntactic feature checking, and that each position in ST, or rather the functional head projecting that position, bears a specific uninterpretable morphosyntactic

feature. In this manner, the STs that are posited serve to model word order restrictions of all sorts.

Such syntactic templates have been generalized to all syntactic structure, resulting in what has come to be called the cartographic approach (see Rizzi 1997, Cinque 1999, and much subsequent work), which draws up (large portions of) an extremely detailed ST encompassing all syntactic structure. The more detailed and encompassing the STs are (call such STs 'cartographic ST'), the less explanatory the model is regarding word order restrictions—the STs provide little more than a description of the word order restrictions themselves.

Various other issues have been noted for cartographic STs. One set of problems concern data that point to the conclusion that there are positions (functional projections) in STs that cannot be ordered linearly; assuming that word order is determined by STs, sets of examples can be constructed that give rise to ordering paradoxes (see Bobaljik 1999, Nilsen 2003). But STs, by definition, involve a complete linear order of positions.

Another type of problem is related to word order flexibility. To the extent that STs determine possible word orders, word order is expected not to be free: given elements occupy given positions in the ST, and there is no room for ordering freedom. Phenomena of genuinely free word order alternations, including those discussed in the present dissertation, or for instance those discussed in Neeleman and Koot (2008), are therefore problematic for the cartographic approach.

Cartography, coupled with a strong interpretation of the Uniformity of Grammars hypothesis, leads to a massive expansion of STs: if there is evidence for a position in an ST in one language (in one construction), then that position is part of the ST across languages. If only a weaker view is subscribed to, viz., that although the ST is universal, not all positions are present in all constructions/sentences, but only those that are occupied by some element, then the syntactic technology to still ensure conformity to the complete linear ordering of the full set of positions becomes cumbersome (e.g., ad hoc additional features and/or a special calculus are introduced). For further general criticism of cartographic STs, see Newmeyer (2008).

Finally, and most significantly for our present purposes, the cartographic view of displacements to positions in STs involves an unappealing degree of redundancy when combined with the feature-checking implementation of Last Resort. In particular, in cartographic STs each position in an ST is inherently associated with a different morphosyntactic feature. Therefore, the association of an uninterpretable morphosyntactic

feature with a position (functional head) in an ST serves only to guarantee that when the appropriate matching element is present in the sentence, then it should move there, thereby satisfying the principle of Last Resort. Beyond that, however, the morphosyntactic feature is informationally fully redundant with the position it is associated with; the job of the feature is only to act as a trigger.

In the case of those movement operations that may be attributed a semantic interpretive effect (like topicalization, focusing etc), positing an uninterpretable morphosyntactic feature may be redundant even for the purpose of triggering the movement itself, if Last Resort is re-defined in terms broader than Full Interpretability. Based on arguments largely independent of the present discussion, Chomsky (2004) makes a suggestion that leads in Chomsky (2007, 2008), where the idea is more fully developed, to a notion of Last Resort that is satisfied not only by feature-checking. Last Resort is generalized as a principle that requires all movement to have a semantic impact, whether that of turning an uninterpretable representation (due to an uninterpretable feature) into an interpretable one (by performing feature-checking), or by achieving a semantic interpretation that is not achieved without the movement (adapting proposals by Fox (2000) and Reinhart (1995, 2006), among others); call this generalized Last Resort.

Assuming the generalized Last Resort principle, and detailed cartographic STs, the movement-triggering potential of uninterpretable features associated with interpretable counterparts on elements receiving some specific (discourse-)semantic interpretation becomes fully redundant. Such uninterpretable features do not serve to define a landing site: that is done by the ST itself. Nor are they necessary to trigger movement to the landing site, if the ST is detailed enough to associate the specific interpretation of the moved element at the SEM interface to the landing site itself. In this manner the movement satisfies Last Resort by virtue of the interpretation it achieves in the given landing site position. Chomsky's (2007, 2008) generalized version of Last Resort makes unnecessary the postulation of those uninterpretable features that are linked to interpretable properties of moved elements that characterize the moved element only in the landing site position (e.g., topic interpretation). By eliminating these uninterpretable features, no extra generative power is unleashed.[2]

A caveat is in order: This does not make uninterpretable features that characterize a position that lacks an associated specific (discourse-)semantic interpretation redundant. For example, in languages like English phi-features of verbal Tense have the function of triggering the movement of an agreeing DP to the canonical subject position.

It needs to be stressed that, if STs are granted, then for Chomsky's generalized definition of Last Resort to make a feature-checking mechanism dispensable for all the different kinds of (discourse-)semantically significant movement operations, the syntactic template ST of positions needs to be maximally articulated (at least in the relevant portions of the ST), i.e., a cartographic approach is called for, where each kind of movement operation (topicalization, focusing, etc) can be assigned a distinct landing site position within the ST, which (absolute) position is in turn associated with the desired (topic, focus, etc) interpretation.

At this point, however, we are back to the problems with the cartographic approach noted above.

A more promising alternative, regarding semantically significant movements, is to combine generalized Last Resort with an account of the relevant word order restrictions that does not postulate STs encoding (discourse-)semantically significant positions at all. To the extent such an endeavor proves to be successful, an analysis based on uninterpretable formal features corresponding to (discourse-)semantic functions becomes unformulable. This is because such features would need to be associated with a functional head, marking the relevant positions in ST; but insofar as the pertinent portions of the ST are eliminated, the associated formal featural triggers cannot be posited. The deconstruction of the (discourse-)semantically significant positions in some alternative terms seems an attractive direction, as it effectively *precludes* the postulation of the problematic uninterpretable features, making their inexistence fall out.

A possible alternative to a ST of absolute positions, exploited fruitfully in recent minimalist work (e.g., Neeleman and Koot 2008), is to re-cast structural restrictions in terms of relative interface configurations as part of the syntax–SEM or the syntax–PHON mapping. Such interface configurations may state what the relative position of an element A needs to be with respect to some other element B if A (or B) is to receive a particular (discourse-)semantic interpretation. The interaction of such relative interface configurations could then give rise to both the relevant word order restrictions exhibited in syntax, and to the partial syntactic flexibility that is attested.

Having laid out the role of cartographic syntactic templates and feature-checking in current mainstream syntactic theorizing in TGG, let us take a moment to briefly review how this basic approach has been applied to Hungarian. This language is known to be characterized by an articulated pre-verbal domain (e.g., É. Kiss 1994, 2002; Szabolcsi 1997;

Puskás 2000). The distribution of (non-adverbial) elements to the left of the finite verb can be summed up roughly as given in (4):[3]

(4) topics > increasing distributive QPs > negation > focus > negation

Note that pre-verbal focus is not presentational/information focus: it is of the exhaustive/identificational variety (see Szabolcsi 1981, É. Kiss 1998, Bende-Farkas 2006), and may be contrastive (see Chapter 4 below). It gets to its pre-verbal position by a syntactic movement obeying islands and licensing parasitic gaps (e.g., Puskás 2000, É. Kiss 2007b).

The elements in (4) are often equated with the left periphery of the clause (e.g., Puskás 2000, É. Kiss 2006b). On the mainstream cartographic view of Hungarian clause structure, similarly to the case of other languages, movements to the left periphery serve purposes of feature checking involving the moved element and an (abstract) functional head located within a fixed hierarchy of functional projections. In terms of this approach, Hungarian is characterized as a language that routinely applies overt movements to a recursive TopP (or RefP, see Szabolcsi 1997), a recursive DistP, hosting increasing distributive quantifiers (see Szabolcsi 1997), and a non-recursive FocP (i.a. Brody 1990, 1995, Puskas 1996, 2000; Szabolcsi 1997; É. Kiss 2002, 2008b; see (2a–c)).[4] Horváth (2000, 2007) proposes to replace FocP housing foci with EI-OpP, which attracts to its specifier expressions with an appended EI-Op (i.e., identificational focus expressions). According to Szabolcsi (1997) and Brody and Szabolcsi (2003), FocP alternates with PredOpP (in Brody and Szabolcsi's (ibid.) terms: CountP), the latter housing 'counters' (e.g. *few* N, *at most five* N). In a neutral clause the finite verb is immediately preceded by the verbal particle (or a secondary predicate).[5]

(5)	a.	$[_{\text{TopP*}} [_{\text{DistP*}} [_{\text{NegP}} [_{\text{FocP}} [_{\text{NegP}} [_{\text{AspP}} \ldots]]]]]]$	(Puskás 2000)
	b.	$[_{\text{RefP*}} [_{\text{DistP*}} [_{\text{FocP / PredOpP=CountP}} [_{\text{AgrSP}}$ V […]]]]]	(Szabolcsi 1997, Brody and Szabolcsi 2003)
	c.	$[_{\text{TopP*}} [_{\text{DistP*}} [_{\text{FocP}} [_{\text{PredP}} \ldots]]]]$	(É. Kiss 2002)

The finite verb immediately follows the fronted focus (or counter), if there is one, while the verbal particle remains post-verbal. This is analyzed as being due to V-movement to the Foc head by Puskas (2000) (following Brody 1990). Szabolcsi (1997), Brody and Szabolcsi (2003) and É. Kiss (2002) do not posit an extra step of V-movement in clauses with

a fronted focus: for the former authors, the finite verb is in AgrS, while for É. Kiss (2002) it is Pred. For reasons of space I omit illustrations here, and refer the reader to the references cited for the full details.

3.3 The uniformity of grammars

The last of the three broad issues touched upon in this introductory chapter concerns the Uniformity of Grammars hypothesis of the MP. Recall that according to this working assumption, which follows from the nature of the program (see Section 2 above), and is taken to be the null hypothesis in the absence of sufficient evidence to the contrary, the syntactic subsystems of languages are fundamentally uniform. The particular aspect of this view that I will briefly focus on here is basic structure. If there is a unique human grammatical system, then we don't expect languages to deeply differ. One relatively deep difference that was proposed in seminal work by Hale (1983) is a Configurationality Parameter, which determines languages to be configurational, having a hierarchical clause structure, or non-configurational, having a 'flat' clause structure. Free word order is an outstanding property of non-configurational languages, many of which have turned out since to be much less non-configurational than previously thought. Influential work by Baker (1988), proposing the Uniformity of Theta-Assignment Hypothesis (UTAH), and by Kayne (1994), predicting a universal hierarchical basic structure for all languages, have been incorporated in one way or another into the current MP, making flat structures undesirable in the minimalist framework.[6]

Various types of radically free word order alternations, understood as alternations that are not correlated with significant (discourse-)semantic differences, have been treated successfully in terms of a hierarchical structure, with the elements participating in the free alternations analyzed as adjuncts (see, e.g., Baker 2001, and references therein). Some apparently free word order alternations which were once thought not to involve semantic correlates have since been found to do so (mostly having to do with information structure), and are therefore amenable to a movement analysis in terms of Last Resort. This includes even Japanese local scrambling, which involves subtle effects on focus structure (see Miyagawa 1997, Ishihara 2001, among others).

3.4 Research questions

With this much background I am in the position to formulate the three sets of research questions that the present dissertation investigates.

(1) *The role of feature checking* In what part is the general computational principle of Last Resort routinely satisfied by formal requirements in terms of morphosyntactic feature checking, ultimately arising from narrow syntax, and in what part by effects of the external interface subsystems of meaning (=SEM) and of sound (=PHON)? Are the latter effects manifested in terms of absolute positions in fixed structural templates ST, or in terms of relative configurations at the interface levels? To what extent are word order restrictions – including 'LF word order' – accountable for by feature-checking?[7] Can apparently free word order alternations be modeled in terms of feature checking? If so, does this need to involve an alternation between the presence and the absence of some morphosyntactic feature?

(2) *The role of syntactic templates* To what extent are syntactic templates consisting of a fixed hierarchy of absolute positions, typical of mainstream minimalist analyses, responsible for word order restrictions, including 'LF word order'? What aspects of the *redundancy* between the mainstream narrow syntactic structural representations in terms of a fixed hierarchy of absolute positions in structural templates and certain interpretive rules of the syntax–SEM interface can be eliminated? Which aspects of the syntactic templates can be reduced to interpretive interface rules, possibly formulated as relative configurations? By performing this reduction, do we at the same time gain a better account of the attested flexibility of word order, including apparently free word order alternations?

(3) *The uniformity of grammars* Can the Uniformity of Grammars hypothesis be maintained in light of apparent evidence of (partial) non-configurationality resulting in radically free word order alternations? In order to cater for such word order alternations, do we need to admit a deviation from the computationally motivated economy principle of Last Resort, or to let pass morphosyntactic features that neither have a morphophonological interpretation in PHON, nor have a feature counterpart (on the moved element) interpretable in SEM?

The remaining part of this introductory chapter is devoted to spelling out how each of the chapters to follow bears on these three families of research questions.

4 An outline of the dissertation

The research questions formulated immediately above are investigated in the empirical domain of Hungarian clausal syntax. The dissertation can be viewed as an extensive case study of the empirical issues raised by the questions in (1–3), but the results, I believe, will be of interest to the reader whose primary concern lies with any one of the empirical domains of Hungarian syntax or with the particular types of constructions in languages in general that the

dissertation discusses in the chapters to come. Even though from the perspective of the overall theoretical model my attention is directed throughout the monograph is the basic set of issues outlined in (1–3), it was my intention to make sure that each chapter also remains accessible in itself to the reader with a specific empirical concern or interest.

Naturally, no one can hope to cover all the constructions that are of relevance to the research objectives formulated in (1–3) even within a single language. My discussion here will therefore inevitable have to be selective, devoting more attention to those empirical themes that I have concentrated on in recent work. At the same time, however, to be able to situate the particular syntactic phenomena narrowly relevant to (1–3) in a somewhat broader empirical context, I will embed their analysis in a wider setting, fleshing out the workings of the larger family of constructions of which they form part. The aspects most closely pertinent to (1–3) will be highlighted and discussed at the end of each chapter.

In Chapter 2 I provide a brief review of some cartographic accounts of the syntax of the Hungarian clause and the most typical semantically significant (A-bar) movements it exhibits, which mostly, though not exclusively, have concentrated on the pre-verbal domain of this language. The particular family of movements and positions this chapter concentrates on are related to scope-taking. I outline a possible deconstruction of part of the syntactic template involved in these approaches, suggesting that an alternative, and in fact more conservative, approach that directly draws on the semantic properties of the elements involved is not only less stipulative, but it also fares empirically better in accounting for the differential scope-taking options – and consequently: LF positions – available to the various classes of syntactic elements involved. This alternative is based crucially on a generalized notion of Last Resort (see Section 3.2).

Chapter 3 begins by reviewing the mainstream feature-checking- and ST-based approach to focus movement in languages like Hungarian, pointing out its weaknesses. An alternative is developed that restricts the role of STs to what is necessary independently of the grammar of focus, arguing that both the (apparently) syntactic restrictions and the partial word order flexibility that are attested can be reduced to properties of the mapping at the interfaces to SEM and to PHON, respectively, without postulating either a special absolute syntactic position for focus or checking of an uninterpretable [foc(us)]-feature. It is then contemplated whether and how the account could extend to the apparently optional fronting of distributive universal (and some other) quantifier phrases.

Chapter 4 is devoted to the apparently free postverbal order. This order is shown to be radically free, having no systematic (discourse-)semantic correlates, precluding a SEM-

interface based treatment. A recent account of this genuinely free word order alternation, drawing on much earlier work, maintains that at the relevant level of structural representation, the post-verbal part of the Hungarian clause is non-configurational, having a flat structure. Adopting the desirable null assumption of the Uniformity of Grammars (see Section 3.3), I develop an alternative analysis that avoids the postulation of such a basic difference between languages as this view implies. In the second part of the chapter a movement-based scrambling account is proposed, which however is not, as it stands, able to identify the trigger of the movement either in interface-terms or in the form of feature-checking.

Finally, Chapter 5 investigates the flexibility involved in the pre-verbal syntactic distribution of adverbials, and the free word order alternation that apparently exists between a pre-verbal and a post-verbal positioning of some adverbial types. This is a rarely researched and poorly understood aspect of Hungarian syntax, and this chapter undertakes the modest task of presenting an outline of a possible account. Three major classes of adverbials are isolated, whose complex and partly flexible pre-verbal distribution is reduced to several syntax–SEM interface configurations involving different adverbial classes and semantic types characterizing distinct clausal domains. Two of these semantic types of clausal domains turn out to be relevant also to focus movement, while the third plays a role in syntactic topicalization. The free alternation between pre- and post-verbal positions of adverbials, on the other hand, is approached in terms of syntactic movement, triggered by SEM interpretability needs, rather than by feature checking. The account is then extended to scrambling, discussed in the previous chapter, with the result that a proper trigger can be identified for scrambling as well.

5 Summary

In investigating apparently free word order alternations and word order flexibility, this monograph, drawing on trends in both non-generative (including functionalist) and in recent generative work, presents an approach to syntactic structure that shifts as much as possible of the burden of the explanation of word order facts from a fixed hierarchical syntactic template ST of absolute positions and from the postulation of narrow syntactic agreement of abstract features to the particular needs of the individual elements themselves that constitute the sentence and to the interpretations they give rise to. In the main, adopting the basic guidelines of the minimalist research program, these needs are imposed by the semantic and the phonological subsystems of grammar interfacing with syntax by interpreting its output. In

broad terms, this book is effectively a study in the deconstruction of ST that replaces the mainstream conception of absolute syntactic positions by the notion of relative syntactic position. In other words, rather than defining syntactic structure as fixed and absolute, I view syntactic structure to be flexible and relative *ab ovo*, taking aspects of rigidity of word order as the exception rather than the rule.

This shift in perspective allows me to assign a number of requirements imposed by the external interface systems of meaning, and to a lesser extent, of sound, a more central, and occasionally more direct, role than in mainstream alternatives. Though departing from the mainstream implementation in several ways, importantly, this approach is fully in line with the minimalist ideal of reducing as much of narrow syntax as possible to syntax-external factors (referred to as the "third" type of factors in Chomsky 2005).

Notes

[1] So-called echo questions like *You saw what?* are not genuine questions in the relevant sense. I use *wh*-movement only for purposes of illustration, and abstract away here from multiple *wh*-questions.

[2] Note the partial convergence with functionalist approaches to displacements. It may also be pointed out that the autonomy of syntax thesis is not compromised here: syntactic movement is still free to apply, but unless it satisfies the broadly interpreted Last Resort due to the *resulting* interpretation it achieves, it is determined to be ungrammatical.

[3] (4) does not include complementizer elements, which precede topic elements, which function as aboutness topics. The latter are logical subjects of predication in the sense of Kuno (1972) and Reinhart (1981); see Kiefer and Gécseg (2009) (cf. Lambrecht 1994 for a discussion of different notions of topic). Aboutness topics may or may not be contrastive, of which neither variety can remain in situ. Increasing distributive quantifiers include, among others, various modified numeral phrases and *every*-NPs; see Chapter 2.

[4] Movement to DistP is arguably optionally overt or covert, see Brody (1990), Surányi (2003, 2004a,b): post-verbal increasing distributive quantifiers (iQPs) may take scope over a pre-verbal focus or over another pre-verbal iQP. É. Kiss (2002) (also in her prior work), in order to account the 'pre-verbal scope' of post-verbal iQPs, invokes an optional stylistic (PF) reordering rule that postposes pre-verbal iQPs to the post-verbal domain in the PHON component (a view adopted in Szabolcsi 1997).

[5] The category of verbal particles forms part of a wider distributional class of elements, commonly referred to in the literature on Hungarian as Verbal Modifiers (VM). VMs are phrase-level elements, including semantically incorporated secondary predicates of various types.

[6] According to the UTAH, identical thematic relationships between elements are represented by identical structural relationships between them a the level of basic structure.

[7] Logical Form is the syntactic representation resulting from the totality of overt (i.e., phonologically visible) and covert (i.e., phonologically invisible) operations, notably including movements. The paradoxical term of 'LF word order' refers to the fact that the positions that elements can occupy in an LF representation are restricted in much the same way as in the case of Surface Structure word order. The LF position of an element, if different from its SS position, can be inferred from a variety of observations, including the role it plays in the semantic interpretation of the sentence (e.g., the element's logical scope).

Chapter 2
Flexibility in scope-taking

1 Introduction

In this chapter I provide a brief review of some formal feature-checking based cartographic accounts of the syntax of the Hungarian clause and the most typical semantically significant (A-bar) movements it exhibits. Such accounts mostly, though not exclusively, have concentrated on the pre-verbal domain of Hungarian. Analyzing data from Hungarian and from English, I outline a possible deconstruction of a particular span in the hierarchical syntactic templates that these cartographic approaches have relied on, namely the range responsible for the modeling of intricate facts of scope-interaction between different classes of scope-bearing (or scope-sensitive) expressions. It is argued that an alternative – more conservative – approach that draws *directly* on the semantic properties of the elements involved is not only less stipulative, but it also has better empirical coverage. In particular, I propose that independently motivated scope-affecting mechanisms interact in complex ways to yield precisely the attested scopal possibilities for the various classes of scope-bearing phrases. These mechanisms are existential closure, reconstruction within A-chains, and Quantifier Raising (QR). This alternative based on QR assumes a generalized notion of Last Resort (see Chapter 1, Section 3.2). It is demonstrated that the analysis simultaneously accounts both for the flexibility and for the restrictions in scope-taking (which, in terms of Chapter 1, Section 3.4, reflects aspects of 'LF word order').

By way of situating the present discussion in a larger context, it is fair to say that divergent scope-taking and scope interaction possibilities of noun phrases have been the focus of interest ever since it became clear that the omnivorous scope-shifting rule of Quantifier Raising (QR) (May 1977, 1985) both under- and overgenerates. In a series of influential studies, Beghelli and Stowell (1994, 1995) and Szabolcsi (1997) dispense with QR and

propose to treat various quantifier classes as performing checking operations in a set of quantifier-specialized functional projections in the clause. Their analysis is commonly seen as a successful account of the rather complex pattern of differential scope-taking options of different classes of noun phrases in languages like English. Furthermore, following Szabolcsi (1997), Hungarian is often taken to display overt evidence in favour of the proposed quantifier specialised functional projections in the clause.

The proliferation of functional projections and formal features as descriptive devices has been a primary concern in the past decade or so, and an object of much conceptual controversy. At any rate, it seems sufficiently clear that within a checking theory of movement, where derived structure is crucially determined by these two interrelated analytic devices, the restrictiveness of any analysis depends to a significant extent on the restrictiveness of the approach to the postulation of functional projections and formal features that the given analysis adopts. Speaking in terms of methodology, therefore, it is desireable that the introduction of functional projections and formal features as new primitives should be motivated by sufficient empirical evidence.

I will demonstrate in this paper that Beghelli and Stowell's/Szabolcsi's quantifier-projections based approach to the scope-taking options of quantifier phrases and other scope-bearing nominal expressions (Q-scope, for short) is inadequately grounded from an empirical point of view, and Hungarian does not in fact provide direct support in its favour. The proposed functional projections give rise to several conceptual complications, and crucially, on closer inspection, the approach both under- and overgenerates in the domain of Q-scope interaction. I show that an alternative, more conservative model, incorporating QR instead of feature-checking quantifier movements directed at specialised functional projections, is able to provide not only a more restrictive, but also an empirically superior account of differential Q-scope. The proposed account is modular in nature in that it explains the attested scopal possibilities for the various noun phrase classes in terms of the interaction of independently motivated scope-affecting mechanisms. These mechanisms include (i) choice functions, (ii) reconstruction within A-chains, and (iii) QR, where the application of each is appropriately restricted.

The chapter is structured as follows. Section 2 makes preliminary notes on existential indefinites and introduces the most immediately relevant data from differential scope-taking. In Section 3, we briefly review and illustrate the A-bar checking model. This is followed by a critical appraisal in Section 4, where this model is shown to be untenable both on conceptual and on empirical counts. Section 5 spells out the proposed alternative tying together

independently motivated assumptions about existential closure, A-reconstruction, QR, and a focus interpretation of numerals. It is demonstrated that no quantifier scope specific machinery is necessary to treat scope-interaction of various Q-classes: both the restrictions and the flexibility of the interaction patterns fall out without further stipulations. Section 6 concludes with a summary and points out some consequences.

2. Scope deviations

2.1. The scope of existential indefinites

The classical QR approach has turned out to undergenerate in a class of cases and overgenerate in another set of cases. The area where the QR approach strikingly undergenerates is the area of existential indefinites. These expressions are known to have a lot more freedom in scope-taking than would be predicted by a movement analysis (like QR). Crucially, the scope of existential weak NPs is unbounded: it is in fact insensitive to islands (like coordinations, *if*-clauses, or complex NPs, for instance).

An early attempt that sets out to explain the apparent unbounded scope of existentials originates with Fodor and Sag (1982), who argue that these indefinites are ambiguous between a quantificational (existential) reading and a referential/specific reading, the latter corresponding to wide scope interpretation (referential expressions, like proper names, can be interpreted in situ, without QR[1]). A prediction of this analysis is that so-called intermediate scope readings (with the indefinite having *inverse* (i.e. wider than surface) scope, but not *maximal* scope) should not exist. However, it has been demonstrated repeatedly (Farkas (1981), Ruys (1992) and Abusch (1994)) that such intermediate readings do in fact exist.

In dynamic models of semantics like Discourse Representation Theory (DRT) or Heim's approach (Kamp 1981, Kamp and Reyle 1993; Heim 1982) indefinites introduce discourse referents by restricted free variables (instead of being quantificational expressions, cf. Lewis 1975). In Heim's model, these variables can then be unselectively bound by some operator (hence their quantificational variability). Their existential force is due to binding by an existential operator, which can be text-level or appended to the nuclear scope of true quantifiers. Then, the unboundedness of their existential scope as well as the availability of the intermediate scopes are derived, and as desired, no movement is involved.

A potential problem for this approach is posed by the fact that it leaves the restriction in situ. This means that assignments not satisfying that restriction (i.e. not being members of the

N-set of the indefinite NP) will also be considered, failing to capture the correct truth conditions. (1a) is a frequently cited illustration of this point. (Reinhart (1997) demonstrates that the problem is rather broad, involving not only overt implications, but also restrictive terms of universal quantifiers, the scope of negation, and it concerns not only regular indefinites, but also *wh*-in-situ and *wh*-expressions in sluicing as well).

(1) a. If we invite some philosopher, Max will be offended

b. $\exists x$ ((philosopher (x) & we invite (x)) $\rightarrow$ (Max will be offended))

(1b) involves unselective binding of an individual variable, which is locally restricted by the predicate philosopher internal to the NP, which is in situ. This representation, however, is incorrect, given that implications are true vacuously if their antecedent clause is false: here any non-philosopher value for *x* will make the antecedent clause true, hence the whole proposition true—contrary to fact. A QR representation of (1a), in contrast to (1b), would pull up the restriction, and thus only philosophers would be considered when assigning a truth value to the implication—a correct result. In fact, Heim (1982) proposes that in such examples QR of the indefinite is at work. However, then we run into a different complication, namely the Subjacency-problem: this instance of QR would not be Subjacency-respecting. As Reinhart (1997) points out, a further problem here is that if we QR an indefinite, we expect it to allow a distributive reading (plural indefinites in general do). However, indefinites scoping out of an island do not allow a distributive reading, as illustrated by the example in (2) (as observed by Ruys 1992):

(2) If three relatives of mine die, I will inherit a house

According to the wide scope interpretation of the plural indefinite in (2), there are three relatives of mine and if all of them die, then I'll inherit a house. On the distributive wide scope reading, however, I will inherit a house even if only one relative of mine (of the three) dies—a reading actually unavailable in (2). Then, a movement (QR) analysis of wide scope indefinites is problematic in view of these facts as well.

Reinhart (1997) proposes a variety of the unselective binding approach which resolves this complication, and which avoids the problem illustrated in (1) as well. Her proposal is that the existential quantification involved is in fact over choice functions (cf. Reinhart 1993, Winter 1995), which apply to the NP-set (i.e. the predicate) denoted by indefinites. Choice

functions apply to any (non-empty) set and yield a member of that set. In her approach the existential operator is introduced much in the same way as in Heim's framework. (1a) will receive a representation like (3):

(3) $\exists f$ (CH (f) & (we invite f(philosopher) $\rightarrow$ Max will be offended))

(3) says that there is a choice function such that if we invite the philosopher that it selects, then Max will be offended. Note that in case of plural indefinites like *three relatives* the choice function will pick appropriate collectives from the denotation of the NP, i.e. a collective made up of three relatives in the case of f(three relatives). First, this treatment correctly predicts the lack of distributivity with island-external scope for existentials (cf. (2)), inasmuch as the indefinite NP itself is not present outside the island in order to be distributed over. Second, it straightforwardly resolves the problem of the interpretation of sentences like (1) inasmuch as a choice function by definition can only output a member of the set denoted by the restriction (i.e. the NP it applies to).[2]

In this picture, we have (i) unselective binding of choice function variables, which strategy is available only to existential indefinites, and which is the only strategy that is available to achieve island-*external* scope for these elements, and we have (ii) QR for generalized quantifiers.[3]

We will return to these results in Section 4 and 5. We move on now to another area where an omnivorous QR rule fails, namely the scope-taking differences that apparently exist between different classes of quantifiers. Such scope-taking differences should not exist if QR applies in the same way to all quantifiers, hence they pose a problem to a uniform QR analysis of quantifier scope.

2.2. Differential scope

Liu (1990), Ben-Shalom (1993) and others point out that in interactions with other quantifier types certain quantifier phrases exhibit a smaller set of inverse scopal options that would be predicted in QR applied to them. Such scope-taking differences are reviewed below.

First consider (4a). Besides the branching reading of (4a) where there is a group of students and a group of classes and each is matched with each, there are two distributive readings (4a) has: one where each of the two students passed possibly different sets of four classes, and one where each of the classes was passed by a possibly different set of students.

Now (4b) is crucially different in that the second one of these readings, where the subject co-varies with the object, i.e. the inverse scope distributive reading is absent.

(4) a. Two students passed four classes S > O / O > S[4]
b. Two students passed fewer than four classes S > O / *O > S

That this is a syntactic effect is shown by (5). In (5a), the *fewer than n*-expression occupies the subject position, and a bare numeral indefinite occupies the object position. In (5b), we have the same, but a universal quantifier as object. In (5c), the comparative numeral expression functions as indirect object, c-commanding the direct object. In these examples, the *fewer than n*-expression c-commands a bare numeral indefinite or a universal overtly, and can take distributive scope over it.

(5) a. Fewer than four students passed two classes S > O / O > S
(inverse scope: Beghelli 1993: 67, Liu 1997: 47)
b. Fewer than four students passed every class S > O / O > S[5]
c. She gave fewer than four articles to two students DO > IO / IO > DO

Fewer than n-type indefinites are not only unable to take inverse scope over a higher plural indefinite, they are also unable to take inverse distributive scope over a c-commanding universal quantifier, as in (6).

(6) Every student passed fewer than four classes S > O / *O > S

According to Beghelli (1993), the class of expressions that behave in this way, i.e. that are unable to take inverse distributive scope include other modified numeral expressions like *at most n* N, *exactly n* N, *only n* N, *at least n* N, and decreasing indefinites like *few* N and *no* N.

If we now try (7), which has a modified numeral both in the subject and in the object position, as Szabolcsi (1997) notes, (with some difficulty) we do get inverse distributive scope ((7) is Szabolcsi's example).

(7) More than three men read more than six books S > O / ?O > S
(Szabolcsi 1997: 116)

Another generalization relates to *bare* numeral indefinites, like *two books*. We have just seen in (4a) that an object bare numeral indefinite can take wide scope over a subject bare numeral expression, or over a subject modified numeral expression, as in (5a). However, as illustrated in (8), when they function as objects, they cannot scope inversely to distribute above a distributive universal. Of course, the bare numeral indefinite can be interpreted as referentially independent of the subject universal, but crucially, it cannot have distributive wide scope over it (the set of students cannot co-vary with the students).

(8) Every student adores two teachers S > O / *O > S

The interaction patterns appear to be rather complex, and clearly, wholly unexpected if QR applies to all the quantifier expressions involved. Beghelli and Stowell / Szabolcsi put forward a model in which such differential scope-taking options are accounted for, and in which QR per se no longer plays any role.

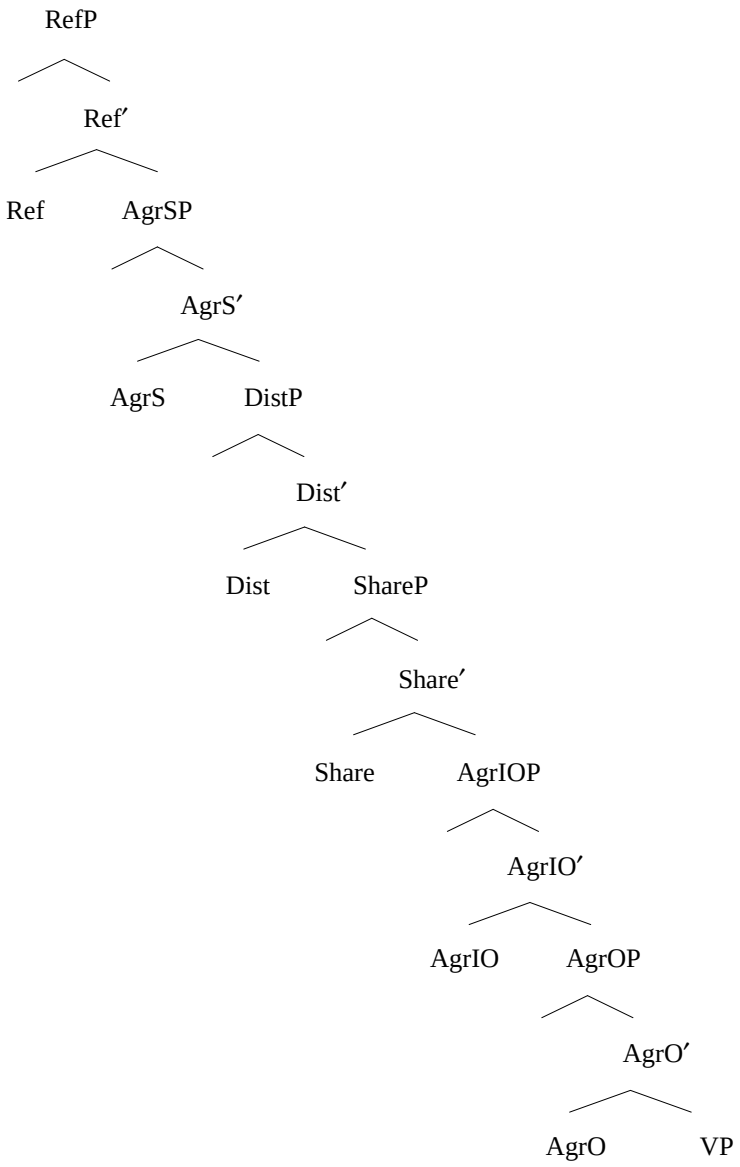
3. The Q-feature checking approach

Beghelli and Stowell / Szabolcsi propose that apart from undergoing Case- an agreement-driven A-movements, quantifier NPs do move to scope positions, as in the QR-based model. However, these scope positions are not created by the movement itself, as with QR, but they are instances of substitution to specifiers of a series of specialized functional projections. This effectively eliminates QR as a non-feature-checking operation.[6]

3.1. Beghelli and Stowell

Let us now have a look at how Beghelli and Stowell's model treats asymmetries in scope-taking reviewed in Section 2.2 above. The core idea is to introduce a number of quantifier-specialized A-bar projections, where different lexical classes of quantifiers can check their characteristic quantifier feature. Certain ambiguities are incorporated in the system by allowing some quantifiers to bear a quantifier feature optionally. The functional hierarchy is given in (9).

(9)



RefP is a checking-site for definites and specific wide scope bare numeral indefinites. DistP houses distributive universals. ShareP hosts bare numeral indefinites that are specific in the sense of Enc (1991) (i.e. range over individuals whose existence is presupposed), but that are being distributed over. Non-specific bare numeral indefinites, as well as modified numeral indefinites move only as far at their appropriate Case-checking A-position (which are assumed to be AgrP projections, but the model would work the same way with A-positions in Spec,*v*P/TP). A difference that Beghelli and Stowell assume to hold between bare numeral indefinites and modified numeral indefinites is that only the latter can reconstruct to their VP-internal base positions, bare numeral indefinites cannot.

Let us briefly review how the account predicts the relative scope facts by way of re-examining some of the examples above. Consider (4b) again, repeated as (10a):

(10) a. Two students passed fewer than four classes S > O / *O > S

b. [$_{AgrSP}$ two students . . . [$_{AgrOP}$ fewer than 4 classes. . .]]

The inverse distributive scope here is impossible because the object modified numeral indefinite is in [Spec,AgrOP], while the subject bare numeral indefinite that is in subject position cannot reconstruct to VP by assumption. Consider now (5b), reproduced as (11a). The universal must be located in DistP. Because the modifier numeral expression can reconstruct to VP as an option, the scope ambiguity is derived.

(11) a. Fewer than four students passed every class S > O / O > S

b. [$_{AgrSP}$ fewer than 4 students [$_{DistP}$ every class …[$_{VP}$ fewer than 4 students…]]]

If the object is also a modified numeral indefinite, then the subject modified numeral expression is able to reconstruct below it, as in (7), repeated as (12a), with the LF structure in (12b):

(12) a. More than three men read more than six books S > O / ?O > S

b. [$_{AgrSP}$ (more than 3 men) [$_{AgrOP}$ more than 6 books… [$_{VP}$ more than 3 men…]]]

Given that distributive universals don't reconstruct, and given that an object modified numeral indefinite can raise only as high as AgrOP, only direct scope is generated for (6), repeated as (13a):

(13) a. Every student passed fewer than four classes S > O / *O > S

b. [$_{DistP}$ every student [$_{AgrOP}$ fewer than 4 classes… [$_{VP}$ (fewer than 4 classes)…]]]

In an analogous situation, as in (14a) repeated from (8), a bare numeral indefinite is able to escape the scope of the subject universal, but cannot distribute over it. This is derived by Beghelli and Stowell by means of moving the object bare numeral to highest position RefP. RefP is stipulated not to allow distributing the quantifier it houses, hence wide non-distributive scope is correctly generated:

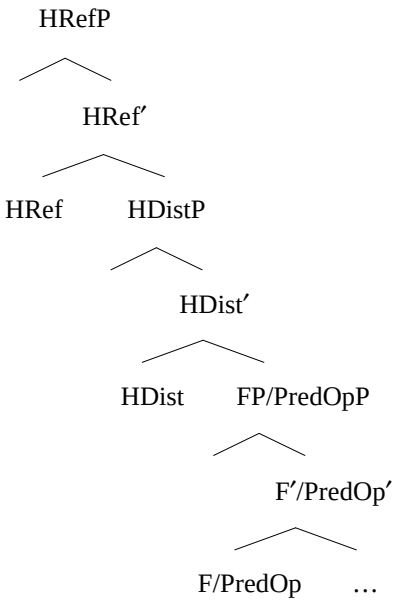
(14) a. Every student admires two teachers S > O / *O > S

b. [$_{RefP}$ two teachers [$_{DistP}$ every student . . .]]

3.2. Scope-taking functional projections and feature-checking in Hungarian

Szabolcsi (1997) argues that Hungarian, with its preverbal overt movements, provides strong evidence for Beghelli and Stowell's (1994/1995; 1997) theory of scope. She transposes Beghelli and Stowell's analysis to Hungarian by positing the following hierarchy of functional projections in the preverbal domain of this language:

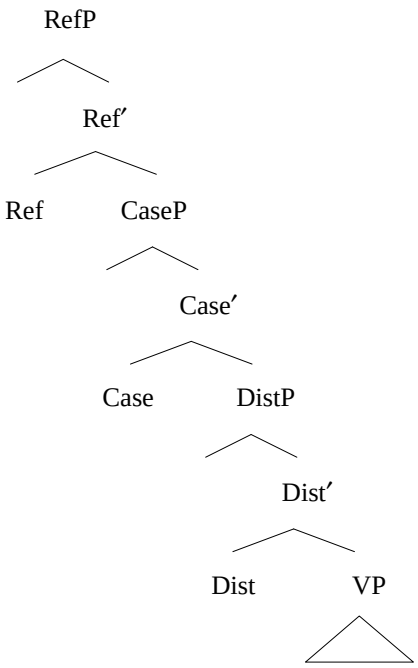
(15)



HRefP is targeted again by referential expressions (definites and wide scope indefinites), HDistP by increasing distributive quantifiers, FP by focus operators (cf. Brody 1990), and PredOpP by the modified numeral class of QPs (as well as bare numeral indefinites with stress on the numeral), which are referred to as counting quantifiers (such as *kevés* N 'few N', (*pontosan*) *hat* N '(exactly) six N')—all in overt syntax. By stipulation, out of the latter two projections (FP and PredOpP), only one can appear in one clause. In the field marked by three dots we find the verb and AgrP projections.

Now, this picture in itself unfortunately does not account for the full set of even the most basic data. Therefore Szabolcsi proposes that the following hierarchy is present in the *postverbal* field of Hungarian, below the raised verb (that is (16) is a continuation of (15)):

(16)



In distinction to HRefP and HDistP, movement to these second instances of RefP and DistP is covert. Inhabitants of CaseP (a recursive Case-checking projection postulated by Szabolcsi where all arguments have a chain link by LF at the latest) can optionally A-reconstruct.

Here too quantifiers bearing the relevant features raise to the corresponding projections. Some Hungarian examples are provided in (17), along with their analysis in the style of Szabolcsi (left arrows indicate LF raising, right arrows signal LF-reconstruction, where the latter one is an optional operation).

(17) a. $[_{HRefP}$ Péter$_i$ $[_{HDistP}$ mindenkit$_k$ $[_{FP}$ a névnapján köszönt fel
P.-nom everyone-acc the nameday-his-on greets Pref
$[_{CaseP}$ t_i $[_{CaseP}$ t_k $[_{VP}$ t_i ... t_k ...]]]]]]
'Peter congratulates everyone ON HIS NAME DAY.'

b. $[_{PredOpP}$ Kevés lányt$_i$ köszöntött fel $[_{RefP}$ $[_{CaseP}$ t_i $[_{VP}$ az osztályfőnök t_i ...]]]]
few girl-acc greeted Pref the headmaster-nom
'The headmaster congratulated few girls.'

c. [$_{HDistP}$ Mindkét fiú$_i$ [$_{PredOpP}$ két könyvet$_k$ hozott [$_{CaseP}$ t$_i$ [$_{CaseP}$ t$_k$

both boy-nom two book-acc brought

[$_{DistP}$ [$_{VP}$ ... t$_i$ ... t$_k$ ... minden órára ...]]]]]]

every class-to

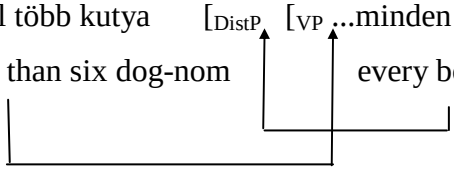
'Both boys brought along TWO BOOKS to every class'

d. [$_{FP}$ Egy keddi napon harapott meg

a Tuesday day-on bit Pref

[$_{CaseP}$ hatnál több kutya [$_{DistP}$ [$_{VP}$ ...minden fiút...]]]] (ambiguous)

more than six dog-nom every boy-acc



'More than six dogs bit every boy ON A TUESDAY.'

In (17a) the various quantifiers move to the respective quantifier projections overtly: the proper name to HRefP, the universal to HDistP, and the focus operator to FP. In (17b), PredOpP replaces FP, and that is where the counting quantifier raises to, while the postverbal definite NP moves to RefP of the postverbal domain covertly. (17c) contains a postverbal universal quantifier, which moves to DistP covertly. Finally, the ambiguity of (17d) is derived by assuming that on the one hand, the universal quantifier moves to DistP covertly, and on the other, the expression *hatnál több kutya* 'more than six dogs' optionally reconstructs from CaseP to its VP-internal position—this being responsible for the ambiguity. The postulation of CasePs is crucially instrumental for Szabolcsi to treat postverbal scopal optionalities.

Having reviewed the mechanisms of the Beghelli and Stowell/Szabolcsi, I will now show what issues this account has to face.

4. Bringing the Q-feature checking approach down

In this section I demonstrate that (i) Hungarian does not provide support for an A-bar checking approach to Q-scope, (ii) the postulation of projections RefP and DistP create serious problems, and (iii) the A-bar checking account is severely challenged by various instances of under- and overgeneration.

4.1. Hungarian does not support the Q-feature checking account

Although Szabolcsi underscores the similarity of the Hungarian and the English clause, and suggests that this similarity appears to support Beghelli and Stowell's theory, in actual fact this similarity is much more limited than what would make a convincing argument. The more different the set of functional projections of English and Hungarian clause structure, as well as the hierarchical order of these projections are, the more the potential justification derivable from such an alleged symmetry diminishes, and at the same time, the more the ideal of reducing cross-linguistic variation to a minimum in the theory is contravened. I will show next that the evidence that can be extracted from Hungarian for English-type quantifier projections targeted by covert movement is inconsequential.

4.1.1. Discrepancies between Q-projections in English and Hungarian

First, as acknowledged by Szabolcsi herself (Szabolcsi 1997: 122), FP does not parallel ShareP of the English clause, neither does PredOpP correspond to AgrP in English. FP is matched with focus interpretation, and it can host definite expressions as well—neither is true of ShareP (as Szabolcsi acknowledges). While AgrP is the locus of phi-feature checking and an A-position, FP/PredOpP is not. Further, reconstruction of bare numeral indefinites from CasePs needs to be optional for Hungarian, but needs to be banned for English.

4.1.2. A free hierarchy?

Second, I show that when we consider a wider range of data, the extensions of the functional hierarchy that are made necessary result in a radically *liberal* functional architecture. Inasmuch as a fixed (absolute or relative) position is an important motivation for postulating a functional projection, the basis of positing the functional projections involved here is considerably weakened.

Let us see what reason there is to believe that the quantifier projection hierarchy must be more liberal than Szabolcsi claims it to be. Hungarian has true multiple foci constructions in the sense of Krifka (1991), involving two independent identificational foci (as opposed to a language like Italian). As has been demonstrated (É.Kiss 1998c, Surányi 2003), in terms of a functional projections based account, the second identificational foci moves to its own separate FocP projection, below the preverbal FocP (which on analyses following Brody (1990) houses the verb itself in its head). Postverbal focus operators may optionally scope inversely over other postverbal quantifiers such as universals, as will be illustrated shortly (in (18) and (20) below). Thus, movement of secondary identificational foci to their FocP

projection is covert, and this FocP can be projected either below or above the LF position of the other postverbal quantifier (say, a universal) (Surányi 2003).

Consider the example in (18), with a postverbal focus and a postverbal distributive universal. The scope ambiguity between these two postverbal quantifiers is represented structurally in (b) and (b'). Namely, postverbal FocP can be projected either below or above postverbal DistP.

(18) a. Péter mondott el egy diáknak mindent csak kétszer egymás után
P.-nom told Pref a student-dat everything-acc only twice in turn
'It is Peter who told a student everything only twice in turn'
OK (Peter >) only twice > everything / OK (Peter >) everything > only twice

b. [FocP Peter . . . [FocP only twice [DistP everything [VP]]]]

b′. [FocP Peter . . . [DistP everything [FocP only twice [VP]]]]

In addition to the ambiguity arising from the relative scope of the postverbal distributive universal and the postverbal focus, there is a further ambiguity, which derives from the interpretation of the indefinite 'a student'. Indefinites that have relative *wide* scope with respect to some operator are placed in RefP in the system being considered. The point here is that the postverbal 'a student' in (18a) can be understood as either co-varying with the two occasions (i.e. the focus) or not, and further, as either co-varying with the things being told (i.e. the distributive universal) or not. That means that we need to revise the range of options in the *postverbal* field at least to (19):

(19) . . . [RefP [DistP [FocP [RefP [DistP [VP. . .]]]]]]

In fact, it is possible to construct examples with yet richer structure, corresponding to highly augmented postverbal scope relations, such as (20a). The representation of (20a) (on the surface scope interpretation of the universal and focus quantifiers) should be (20b), where RefP-s mark the possible LF positions of the indefinite 'a room'.

(20) a. Péter beszél meg minden vizsga elõtt csak kétszer
P.-nom discusses Pref every exam before only twice
minden diákkal csak három vizsgakérdést egy teremben
every student-with only three test questions-acc a room-in
'It is Peter who discusses only three test items with every student only twice before every exam in a room'

b. [FocP Peter . . . [RefP [DistP before every exam [RefP [FocP only twice . . . . . [RefP [DistP with every student [RefP [FocP only three test items [VP]]]]]]]]]

The picture we have arrived at by simple logical extension of Szabolcsi's model for Hungarian appears rather unconstrained: in the postverbal field, RefP, DistP and FocP can be projected at any point freely, interspersing with each other.

Curiously, the same does not hold of the same projections in the preverbal field: there they can only be projected in the order RefP > DistP > FocP. We return to this, as well as further asymmetries between the preverbal and the postverbal quantifier-projections directly.

4.1.3. RefP is unlike HRefP

I will argue now that the presumed parallel between Hungarian overt HRefP and English covert RefP[7] does not hold: these two projections are essentially different in their properties. Further, in some crucial cases when we expect overt movement to Hungarian HRefP to happen if HRefP did parallel English RefP, these movements do *not* happen. I will also argue that HRefP is distinct not only from English RefP but also from Hungarian (postverbal) RefP.

Let us start with this last point, i.e. the difference between Hungarian preverbal HRefP and postverbal RefP. A syntactic asymmetry is that movement to HRefP is overt, and movement to postverbal RefP is covert. As for phonological and semantic interpretation, putative inhabitants of RefP have no special status, which is especially clear if we contrast them with inhabitants of HRefP. First, definites and indefinites do not bear obligatory stress (can be deaccented) when in HRefP, whereas when they are in RefP, deaccenting is not available (cf. É.Kiss 1994a).

(21) Az (')igazgató bemutatta minden lánynak egyenként a 'fiúkat
the director-nom Pref-introduced-3sg every girl-acc one-by-one the boys-acc
'The director introduced the boys to every girl one by one'

Intonation can be rising on elements in HRefP, but not on elements in RefP. Also, an intonational boundary can be found after HRefP, but not after RefP.

From a discourse semantic perspective, it can be observed that inhabitants of HRefP need to be high accessibility entities in the sense of Ariel (1990, 1994), while inhabitants of RefP need not. This explains the acceptability contrast of the intended co-reference in (30), where judgments refer to a discourse-initial position (the pronoun in (30a) is supposedly in RefP, while it is in HRefP in (30b)).[8]

(22) a. Mindig veszekszem vele$_i$, Péter$_i$ mégsem haragszik meg
always quarrel-1sg with-him P.-nom still_not become_angry Pref
'I always quarrel with him, Peter nevertheless is not angry with me'

b. ?* Vele$_i$ mindig veszekszem, Péter$_i$ mégsem haragszik meg
with-him always quarrel-1sg P.-nom still_not become_angry Pref

Further, it is a long-standing generalization that expressions that are in HRefP for Szabolcsi function as logical subjects of categorical judgments (cf. e.g. Kuroda 1972). Now the same does not hold true of postverbal referentials/specifics.

Observe further that the *English* RefP originally proposed by Beghelli and Stowell also systematically differs with respect to the properties we have just enumerated from Hungarian overt HRefP. The properties of the inhabitants of HRefP (high accessibility, logical subject interpretation, overtness of movement, special prosody) make them similar more to English topicalized constituents, while inhabitants of English RefP are an unmarked case. (Note that English topicalization falls outside the domain described by Beghelli and Stowell: it is a syntactically higher, CP-related phenomenon.)

Thus, we can conclude that the claim that Hungarian overt HRefP is parallel to English RefP and that therefore Hungarian provides overt support for a Beghelli and Stowell style analysis cannot be upheld.

There is a crucial set of constructions where, if HRefP really paralleled English RefP, then we would expect *overt* movement to Hungarian HRefP to take place. This case is illustrated in (23), and we can see that the expected movements do *not* happen to derive the readings in (b) and (c).

(23) Mindkét fiú minden lánynak kölcsönadott két könyvet
both boy-nom every girl-dat Pref-lent-3sg two book-acc
'Both boys lent two books to every girl'
a. both boys > every girl > two books
b. both boys > **two books** > every girl
c. **two books** > both boys > every girl[9]

The same effect can be replicated with a preverbal focus instead of preverbal universals. Hungarian, once again, fails to supply the relevant *overt* evidence for movement to RefP. The proper generalization is not that if an indefinite takes scope over a preverbal QP than it has to overtly move to HRefP, but the reverse: if an indefinite has moved overtly to HRefP (i.e. has been topicalized, as I am arguing), then it takes scope from there.

4.2. The problematic nature of RefP

As a last blow to the status of RefP, while (overt) movement to the HRefP position has in fact been demostrated to respect Subjacency (e.g. Puskás 2000), existential indefinites are known to be scopally free (e.g. Abusch 1994, Reinhart 1995), i.e. to violate Subjacency. Given this fact, *the scope* of existential indefinites *itself* does not motivate a functional projection as a landing site, since the syntax/semantics mapping must minimally incorporate a NON-movement mechanism for the treatment of the scope of such NPs in any case. The same consideration applies to English RefP. Given that in Beghelli and Stowell's system, the scope of specific indefinites is the only remaining motivation for RefPs, this means that whatever mechanism we may choose to treat the unbounded scope of such indefinites, this mechanism (typically a variety of unselective binding) inevitably *subsumes* the coverage of movement to RefP—which then appears redundant.

In fact Beghelli and Stowell need a special stipulation related to RefPs, which is we don't need to formulate if we work with a combination of the unselective binding approaches and QR, i.e. the conservative approach. The stipulation is that nominals in RefPs cannot be interpreted distributively, as opposed to inhabitants of all other projections, for according to Beghelli and Stowell, projections like ShareP, AgrSP and AgrOP *do* get associated with a silent EACH distributive morpheme, but RefP does not. That on Beghelli and Stowell's approach inhabitants of RefP must not receive a distributive reading is shown by specific indefinites with *inverse* wide scope that requires them to be moved to their scope position.[10]

Now, considering the conservative model, QR-ed quantifiers are interpreted distributively by definition. On the other hand, the existential closure mechanism is not a distributive operation. If inverse wide scope of existential indefinites is derived by existential binding under closure, such existentials can only have non-distributive wide scope. On such an approach we can relate non-distributivity of such expressions and their non-movement properties.

4.3. The problematic nature of DistP

Let me comment finally on what Hungarian has revealed about DistP. We have seen before that basically DistP can be projected between any two quantifier projections, hence its positional motivation seems to dissolve in Hungarian.

Similar considerations again extend to English. Consider a sentence with more than one universal quantifier and a reading where another quantifier takes scope in between them, such as illustrated in (24).

(24) Every teacher told (exactly) two students everything he knows
OK every teacher > (exactly) two > everything

(24) does have among its readings, not even very difficult to get, a reading where 'every teacher' outscopes 'two students' which phrase has the object universal in its scope. Now Beghelli and Stowell cannot generate such scope relations in sentences of this (or of an even more complex) sort—at least without introducing further DistP projections along the clausal hierarchy.

Another complication related to DistP is the following. In order to be able to generate distributive wide scope of a subject over a distributive universal object, as in (5b) repeated here as (25a), DistP is crucially posited *below* the surface position of the subject (i.e. AgrSP), as in (25b).

(25) a. Fewer than four students passed every class S > O / O > S[11]
b. [AgrsP fewer than 4 [DistP every class …]]

However, this entails that when the subject itself happens to be a distributive universal, we have either improper movement from DistP (an A-bar position) to the subject position (an A

position), or we have first A-movement to subject position followed by a lowering movement to DistP—both analyses are clearly problematic.

Finally in this series of conceptual counter-arguments, a serious drawback of treating the scope of universal quantifiers as A-bar checking is that we apparently lose all hope of accounting for the (rough) clause-boundedness of such quantifiers (in terms of scope economy, in terms of the status of non-checking movements in phase theory[12], or otherwise), given that the corresponding movement in Beghelli and Stowell's / Szabolcsi's system is a feature-checking driven A-bar movement: nothing rules out long movement of an *every*-QP to DistP of a superordinate finite clause.

4.4. Descriptive coverage: under- and overgeneration

So far we have seen that Hungarian does not provide overt evidence for the assumed hierarchy in that some crucial putative parallels do not hold, and even the English hierarchy needs to be loosened up to get the fact right, and finally we have seen some *conceptual* arguments against the RefP and the DistP analysis.

Let me now point out some specific cases where the Beghelli and Stowell account fails to be *descriptively* adequate. One case of undergeneration we have already seen illustrated in (24), with two distributive universals and an interfering other quantifier.

A second case in point is (26), which is essentially analogous to our earlier example (4a).

(26) Four students read three books[13] S > O / O > S

Given that Beghelli and Stowell assume that, first, an object bare numeral indefinite never moves above the subject position, and second, that bare numeral indefinites do not reconstruct to their base position, it follows that only direct scope is generated for such examples. However, as Beghelli (1993: 66), Liu (1997: 41) and Reinhart (1997: 369) note, inverse distributive scope is in fact available.

A third case is illustrated by (27).

(27) Less then four students read exactly three books S > O / *O > S
Liu (1997: 18)

In (27), inverse distributive scope is unavailable. Given that modified numeral indefinites are able to reconstruct back to VP, on Beghelli and Stowell's assumptions we expect such inverse scope to be available. We saw that it is indeed available in some cases, such as (7) above, repeated as (28). (27) then involves overgeneration.

(28) More than three men read more than six books S > O / ?O > S

A fourth case involves internal arguments. Consider (29a):

(29) a. Mike showed five films to every guest
b. [DistP every … [AgrOP five [VP …five…]]]]

Beghelli and Stowell's system predicts that the VP-internal QPs involved in such a sentence type can occur at LF as schematized in (29b). The direct object raises to DistP, while the indirect object, being a bare numeral indefinite, cannot raise higher than AgrOP. This predicts that only an *inverse* scope reading should exist between these two expressions—this is contrary to fact: a rather prominent reading of (29a) is one with direct scope. This reading fails to be generated for (29).

A last example involves overgeneration again. In (30a) we have a sentence with two modified numeral indefinites and a universal quantifier. One LF-representation generated by Beghelli and Stowell's model is (30b). This corresponds to the scope relations with DO scoping over IO in turn scoping over the Subj. Such scope relations, however, don't actually obtain for (30a) type examples.

(30) a. Exactly two teachers showed less than five tree diagrams to every student
b. [AgrSP exactly 2 [DistP every [AgrOP less than five [VP …]]]] S> IO > DO

In fact, similarly to (27), Beghelli and Stowell generate DO > S scope relations, erroneously. Even if we stipulate (on the basis of sentences like (27) and the present example) that in certain cases—including (27) and (30)—the modified numeral in subject position cannot reconstruct across the DO modified numeral for some reason, we would then *only* generate a S > IO > DO scope order, other scope orders would not be generated. This is because the IO *every*-quantifier must be located in DistP, its position being fixed. If the subject modified numeral expression cannot reconstruct, as we would be assuming, then the only scope order,

once again, is: S > IO > DO. This means that in Beghelli and Stowell's system, stipulating that the subject cannot reconstruct in cases like (27) and (30) does not help: another prominent available scope order, namely IO > S > DO, would still be missed.

To sum up, we have seen that the Q-checking approach to Q-scope faces severe challenges. Not only Hungarian fails to provide any evidence in favour of such an approach, but also, positing RefP and DistP projections creates acute problems of both a conceptual and an empirical nature. In the last subsection I established that unfortunately, the descriptive coverage of the account itself also leaves much to be desired.

5. A QR-based approach

I will demonstrate now that a model incorporating Quantifier Raising, when augmented with independently motivated assumptions of existential closure over choice function variables (cf. Section 2.1 above) and A-reconstruction, is able to provide a more constrained, and at the same time empirically superior account of differential Q-scope.

In general terms, I believe that as a methodological ideal it would be appealing to connect the differential scope-taking options of quantifier classes to their lexical semantic characterization, in particular, to relate their semantic characterization to the different mechanisms of scope-taking that they can participate in. In a broad sense, this methodological stance is the same as the one taken in Beghelli and Stowell's / Szabolcsi's work.

In what follows, I will first lay out the assumptions I adopt. These assumptions have been independently argued for, and I will argue that, when combined, they yield precisely the complex interaction patterns reviewed above. The central one of these assumptions is that QR exists as a movement serving *purely* scope-shifting, and that it applies to GQ-NPs.

5.1. Bare numeral indefinites: Closure and A-reconstruction

First, following a Heimian treatment, the class of bare numeral indefinites[14], being open expressions with an unbound restricted variable, can be bound under closure. For concreteness, I adopt Reinhart's choice function approach here, but the particular choice among the closure approaches will not play a role here.

Bare numerals are taken to be cardinality predicates, following Milsark's (1977) analysis of Definiteness Effect contexts. Bare numeral cardinality predicates are second order

predicates applying to sets, assigning to them their cardinality. Hence, bare numerals only restrict, but do not bind the given variable (Kamp and Reyle 1993).[15]

(31) *four classes* $\{X \mid \text{class}(X) \,\&\, |X| = 4\}$

The 'binding of choice function variable under closure' approach to (plural) existential indefinites correctly predicts unbounded wide scope. The closure approach predicts that such expressions do not have inverse *distributive* scope, since distributivity is not introduced by existential closure higher up[16] (distributivity is a property of GQs only). That is, this is the prediction, provided that plural (bare numeral) existential indefinites are *only* interpretable as restricted indefinites with a free variable. We have seen, however, that such indefinites *are* in fact able to have distributive inverse scope, as in (4a), and (5). Some examples are repeated here in (32).

(32)	a.	Two students passed four classes	S > O / O > S
	b.	Fewer than four students passed two classes	S > O / O > S
	c.	I gave fewer than four articles to two students	IO > DO / DO > IO

Now, inverse scope in these examples can be treated without adding anything to a standard model, given that in minimalism bare numeral indefinites as noun phrases participate in A-movement dependencies (Case- and/or agreement-related A-movements). Assuming, as is standard, that A-movement can occur covertly and that A-movement chains can reconstruct[17], there is a possibility for these quantifiers to exhibit inverse scope in interaction with certain other quantifiers merely by virtue of forming A-chains. Inverse scope effects will arise due to A-reconstruction either if the bare numeral indefinite in question undergoes A-reconstruction itself, or if another quantifier A-reconstructs *below* the bare numeral indefinite.

Up to this point we have left it an open issue whether bare numeral indefinites are in fact ambiguous between a variety of plural Heimian indefinite, and a GQ interpretation (involving an existential quantifier). Now, if bare numeral plural indefinites did have a GQ interpretation and QR applied to them, we would certainly make a number of false predictions.

Among them, we would predict that an object bare numeral indefinite take distributive scope over a subject universal quantifier—this is false (cf. (8)). If bare numeral indefinites did QR, another prediction that would be made is that inverse scope of an object bare numeral

indefinite over a subject bare numeral indefinite can be achieved without A-reconstruction of the subject: the object needs to QR above the subject. But if A-reconstruction is not involved in such cases, then this makes an interesting prediction: namely, we do not expect any interference with respect to the binding options for the subject, given that the subject does not need to A-reconstruct. On the other hand, if QR is *not* available to bare numeral indefinites, then the subject *does* need to reconstruct for inverse scope, and we expect interference with binding of the subject.

To test this, consider (33):

(33) a. Bill believes two pictures of himself to have outraged three Hungarian critics
b. Bill believes that two pictures of himself have outraged three Hungarian critics

If the reflexive embedded in the subject has to reconstruct to obtain inverse distributive scope, than the reflexive will at the same time get out of the local domain of its antecedent—hence, such inverse scope reading is expected to be unavailable in this case. In light of (33), this is indeed what happens: a scenario involving two different pictures matched to each of the three critics (i.e. a distributive inverse scope) is not among the interpretations of (33). Hence, (33) makes an argument again against QR-ing bare numeral indefinites. This contrasts with examples similar to (33), but with a universal quantifier in the object positon of the embedded clause: there inverse scope of object over subject is available precisely because universal quantifier can QR above the subject (e.g. *Bill believes two pictures of himself to have outraged every Hungarian critic*).[18, 19]

It seems then that bare numeral indefinites do not QR, and can take inverse distributive scope only if A-reconstruction occurs. However, for these cases, i.e. for the cases when their inverse scope is *distributive*, we need to provide a source for distributivity. Existential closure (over choice function variables) may apply in principle at any syntactic point (including intermediate readings (shown to be available a.o. by Farkas (1981), Ruys (1992) and Abusch (1994))), that is, including locally, immediately above the bare numeral indefinites. However, existential closure over choice function variables does not yield a distributive reading, as we have already pointed out.

Such distributive scope is available to bare numeral indefinites only *in situ*, in their A-position (e.g. when they are in subject position, or when another QP A-reconstructs below their Case-related A-position); more precisely, distributivity is available for them in their A-position if the verb is compatible with such an interpretation. We can then relate these distributive readings

of bare numeral indefinites locally to the distributive component (often modeled in the form of a distributive operator) in the semantic representation of the relevant verb (or other predicate). This produces exactly the effect we have witnessed: distributive interpretations of bare numeral indefinites available only locally, in the A-positions.

Thus far, we have A-movement / A-reconstruction, as well as binding under closure in the picture.

5.2. Modified numeral indefinites: A-reconstruction and the role of focus

I take Liu's (1990) basic observations of the inability of modified numeral indefinites to take inverse distributive scope (in most of the cases) to be crucially important. In a model that incorporates QR, this should mean that these quantifiers do not participate in QR. They clearly participate in (agreement- and Case-related) A-movement dependencies. The null hypothesis is that, similarly to bare numeral indefinites, modified numeral indefinites can undergo A-reconstruction.[20]

Modified numeral indefinites and nouns modified by *few*, as opposed to bare numeral indefinites, do not have unbounded wide scope. This means that their numerals do not get interpreted as cardinality predicates, they don't have a free variable to come under closure, i.e. they are quantified independently of closure.[21] If QR exists as a scope-shifting operation, then it should apply to modified numeral indefinites provided that their modified numeral is a determiner and they are simple GQs.

I argued in Surányi (2004b) that decreasing and non-monotonic modified numeral indefinites (i.e., counters) are, and increasing ones can be, interpreted as focus, and in Hungarian they occupy a syntactic focus positon. Krifka (1999) proposes that modified numerals including the 'at least/at most n N' or 'less than/more than n N' type are cases of focus, and they are not GQPs (essentially 'at least'/'more than' etc. are similar to a focus particles). This means that the modified numerals are not simply determiners, but involve focus on the numeral in a domain of alternatives. In Surányi (2004b) I subscribed to a weaker claim than Krifka's (ibid.): informally, increasing modified numeral NPs can also be group-denoting, in which case they can function as a GQP too, not only as a focus. If so, then we understand why decreasing and non-monotonic counters do not appear to undergo QR: this is because they are not GQPs to begin with.[22]

Here I only mention two points that support the view that decreasing and non-monotonic numeral indefinites are foci. The first one is a plausibility argument: the semantics of counting quantifiers render them eligible to fulfill an identificational focus function. As

Szabolcsi (1981) argued, Hungarian pre-verbal focus performs identification (it is identificational focus, in terms of É. Kiss 1998c). It is true that in sentence like *A postás öt levelet vitt ki*, lit. 'The postman five letter-acc delivered' the expression *öt levelet* 'five letters' does not necessarily identify the set of things delivered by the postman—the reason why Szabolcsi (1994), followed in this regard by Szabolcsi (1997), does not consider such expressions to be focus. However, the focus structure of this sentence type can be given an alternative analysis: informally, the presupposed part of the sentence above is that the postman delivered some letters, and the focus of the sentence is merely the quantity. In this conception, the function of a counting quantifier is the identification of cardinality. That is, such quantities can be individuated (to use Szabolcsi's 1994 term) and identified to the exclusion of other quantities. That is, the focus value (in terms of Rooth's 1992 focus semantics) can be given informally as {S:. *q* [S = the postman delivered *q* letters]}.[23]

The second point that I will briefly mention pertains to Hungarian, where the class of modified numeral indefinites at issue behave like identificational foci (id-foci) in at least two regards (see É. Kiss 1998c, as well as Chapter 3 for the notion; English in situ focus is not identificational, see É. Kiss, ibid.). It is a well-known fact that in some languages focus manifests itself in the form of the predicate of a pseudo-cleft. We can observe that exactly those quantifiers can function as predicates in Hungarian that are PredOp operators (or 'counters') for Szabolcsi (1997). Further, counters are able to appear in the immediately pre-verbal field when they co-occur with a post-verbal identificational focus within the same clause. Generally, such syntactic behavior is limited to expressions that are themselves id-focus phrases. The conclusion to draw is that counters can be id-foci in Hungarian. From the perspective of prosody, the stress pattern of preverbal PredOp operators and the verb that follows them is identical with the stress pattern of the focus followed by the verb: the preverbal operator bears emphatic stress, accompanied by a subsequent stress reduction on the verb. Based on these arguments (see Surányi 2004b for further details), we can conclude that counting quantifiers are identificational foci, and PredOpP effectively reduces syntactically to Hungarian FocP. Hungarian, a language that routinely uses identificational focusing, construes counters as identificational foci.

The basic assumptions have now been spelt out. We have A-movement and A-reconstruction for both *bare* numeral indefinites and *modified* numeral indefinites, where the former are bound under existential closure, and the latter are quantified by focus. QR applies only to the remaining GQs, like distributive universals, *most*, proportional *many*, etc.

5.3. A-reconstruction and focus

The focus treatment of modified numerals, in fact at the same time buys us something extra as well. It is argued in Boeckx (2001) that A-reconstruction is sensitive to quantificational interveners.[24] Now since focus is a quantificational intervener, this should mean that modified numeral indefinites are expected not to allow A-reconstruction to happen across them.

In fact this is what seems to happen. Consider the contrast from (4) again.

(4) *A-reconstruction of subject*

a. Two students passed four classes S > O / O > S

b. Two students passed fewer than four classes S > O / *O > S

In (b) the subject cannot reconstruct below the Case position of the object (SpecAgrOP or Spec*v*P), because the object is interpreted as focus, hence quantificational.

5.4. A-reconstruction and the Mapping Hypothesis

We have taken bare numeral indefinites to be able to A-reconstruct. However, this should not be as free as with modified numeral indefinites. In particular, under some version of Diesing's (1992) Mapping Hypothesis, *specific* existential indefinites cannot appear inside the predicate phrase, i.e. *v*P/VP, at LF. Modified numeral expressions like 'exactly five boys' or 'less than three books' can freely reconstruct to *v*P/VP, given that they do not introduce discourse referents, they don't have a specific interpretation. However, although bare numeral subjects may take narrower scope than a bare numeral object (as in (4a)), this clearly appears to be a dispreferred interpretation. It is in fact next to impossible if the subject bare numeral indefinite is a partitive, as in (34).

(34) Two of the men read three books S > O / *?O > S

As Szabolcsi points out, inverse distributive scope is extremely degraded here. Our explanation comes from the Mapping Hypothesis: 'two of the men', being partitive and specific (in the sense of Enc 1991), cannot reconstruct to *v*P/VP. To the extent that ordinary bare numeral indefinites in subject have a preference to be interpreted as specific (they are the default topic), their A-reconstruction is also dispreferred—though possible.[25]

5.5. The model at work

Let us see how the model I have drawn up derives the other scope-asymmetries above (we have just seen what explains (4a,b)). For ease of reference, I repeat illustrations as well as their numbers from the previous examples. The reason of why the inverse scope is possible (or why it is impossible) is indicated above each example.

Consider again sentences in (5). (5a) involves a modified numeral indefinite subject, which may undergo A-reconstruction in order to yield an inverse scope effect. (5b) is different from (5a) only in that it has a universal quantifier as the object. Now in addition to A-reconstruction of the subject, we also have QR of the object that can produce inverse scope relations in (5b). (5c) allows inverse scope relations between indirect and direct objects. This once again is due to A-reconstructability of the indirect object from its Case-checking A-position to below the Case-position of the direct object.

(5) *A-reconstruction of subject*

a. Fewer than four students passed two classes S > O / O > S
(inverse scope: Beghelli 1993: 67, Liu 1997: 47)

QR of Obj (to v*P / to TP) / A-reconstruction of Subj*

b. Fewer than four students passed every class S > O / O > S

A-reconstruction of IO

c. I gave fewer than four books to two students IO > DO / DO > IO

The inverse scope relations here are all derived.

Consider now (6). (6) does not admit inverse scope. This is because on the one hand, the subject *every*-QP undergoes QR to TP and does not A-reconstruct, and on the other hand, the object is a modified numeral indefinite, which is not a GQ, hence cannot QR above the subject.

(6) *Subject QR-s + Inability of Obj to QR*

Every student passed fewer than four classes S > O / *O > S

(I will put example (7) aside for a moment, and will return to it presently.) The same scenario obtains in (8).

(8) *Subject QR-s + Inability of Obj to QR*

Every student admires two teachers S > O / *O > S

The subject expression undergoes QR, but the object bare numeral indefinite cannot take distributive scope higher than its surface position (cf. also Footnote 22).

Let us see how we can derive the scope relations in sentences which proved problematic for Stowell and Beghelli above. Consider (24) again.

(24) *Subject QR-s + IO in [SpecAgrIOP]/[SpecvP] + DO (short-)QR-s*

Every teacher told (exactly) two students everything he knows

OK every teacher > (exactly) two > everything

Here the subject *every*-QP undergoes QR, the indirect object undergoes A-movement to its Case position ([SpecAgrIOP] or (outer)[Spec*v*P]), while the direct object undergoes short QR to adjoin to *v*P (or VP) a position below the Case position of the indirect object.[26]

(27) is a sentence with a modified numeral indefinite subject and a modified numeral indefinite object.

(27) *Subject cannot A-reconstruct across focus*

Less then four students read exactly three books S > O / *O > S

Liu (1997: 18)

What we have seen is that in such a sentence the inverse scope interpretation is unavailable. In the present terms this means that A-reconstruction of the subject cannot take place. Indeed it should be impossible, inasmuch as the object is a (non-monotonic) modified numeral expression, which we have claimed to be focused, and hence to be an intervener for A-scope-reconstruction.

Another example that posed a complication for the A-bar checking approach was (29a).

(29a) *Object QR*

Mike showed five films to every guest

The direct scope is straightforward to derive here: the indirect object needs to QR to a position below the Case position of the direct object. Example (30a) has proven even more notoriously difficult for the Beghelli and Stowell approach.

(30a) *Subject cannot reconstruct across focus IO + Obj QR*

Exactly two teachers showed less than five tree diagrams to every student

Here the direct object can QR to *v*P. The subject and the direct object can only have direct scope relations. This is because the subject cannot A-reconstruct across a focused direct object, and hence the S > DO scope relations are invariable in this sentence. When the indirect object QR-s above the subject position AgrSP, we have IO > S > DO, i.e. the scope relations not captured by Beghelli and Stowell.[27]

Let us come finally to the example that we have put aside: (7). (7) involves two modified numeral indefinites, just as (27), but it contrasts with (27) in marginally allowing the inverse scope reading.

(7) More than three men read more than six books S > O / ?O > S
(Szabolcsi 1997: 116)

Now the first observation to be pointed out is that 'more than six N' is special among modified numeral indefinites in Hungarian as well: it can appear either in focus position, or can be fronted to the left of the focus position. This means that not only a focus interpretation is available to 'more than'-modified numerals. Second, as Liu (1997: 23) notes, there is a felt contrast between (35a) and (35b).

(35) a. Five teachers graded more than twenty students
b. Five teachers graded fewer than twenty students

In (35b) the scope-independent reading does not obtain: (35b) cannot mean that there is a set of teachers and a set of students and each graded each. However, (35a), with some difficulty, can have such a reading, introducing a referent set of students. In Liu's terms, although 'more than n' NP-s are basically non-G-specific, they can be marginally interpreted as G-specific, where 'more than n' is interpreted similarly to a *bare* numeral. Now inasmuch as an interpretation other than focus is marginally available to 'more than n' NP-s, which is similar

to the interpretation of bare numerals, introducing a discourse referent, they are expected to be able to be crossed over by A-reconstruction. This is what happens in the examples in (7) and (35a).[28, 29]

A final note concerns Weak Crossover (WCO). Consider (36) first. Here the indirect object *every teacher* cannot bind the pronoun inside the subject. In (37), in contrast, the object *two of the teachers* can. The present account captures this contrast in a straightforward manner. In (36), A-reconstruction of the subject is blocked due to the presence of the focussed object *few students*. Then the only possibility for the *every*-QP to bind the pronoun is to QR above it; but that results in a WCO violation. On the other hand, in (37) the subject is able to A-reconstruct and in this reconstructed *vP*-internal position the bare numeral object can bind the pronoun from AgrOP. No WCO violation is triggered.

(36) a. *Exactly two of his$_i$ colleagues introduced few students to every teacher$_i$

b. [every teacher$_i$ [AgrSP exactly 2 of his$_i$ colleagues … [AgrOP few [VP …]]]]

(37) a. Exactly four of their$_i$ students adore two of the teachers$_i$

b. [AgrSP … [AgrOP 2 of the teachers$_i$ [VP exactly 4 of their$_i$ colleagues …]]]

This account is made possible by the assumptions that I have put forward and in this sense it provides further support in their favour.

Let us turn now to the Hungarian data. Before spelling out the relevant predictions, it should be pointed out that identificational focusing of any element gives rise to a new proposition: an identificational focus (id-focus) is interpreted as a predicate taking the rest of the clause (its sister constituent) as its argument (see Chapter 3 for further details).

First, increasing distributive quantifier expressions, which are GQ-phrases, are subject to QR, which is a covert movement operation.[30] QR raises out of, and attaches to propositional categories (which, as a result of QR itself, are turned into a one-place predicate). This allows for a significant amount of flexibility in "LF word order," i.e., the scopal positions such QPs can covertly raise to. Because decreasing numeral indefinites and (in the relevant uses) non-monotonic numeral indefinites (=counters) can function as id-foci in Hungarian, they form a new proposition at their LF position. I showed elsewhere that post-verbal in situ id-focus in Hungarian undergoes covert movement to its 'scope' position (which, for reasons I examine in Chapter 3, is restricted to positions below that of the pre-verbal id-focus). As I argue in Chapter 3, id-foci also raise out of, and attach to propositional

categories, just like GQPs. It follows from this that we correctly predict that the scope interpretation of a GQP and that of a counter phrase should be free (within the postverbal domain) with respect to any other GQP, counter, or for that matter, with respect to another id-foci (see the examples in (18) and (20) above).

The idea that counters can be id-foci in Hungarian accounts for why they can be fronted to the immediately pre-verbal position, inducing verb–particle inversion. What it does not account for in itself is why this fronting operation is obligatory, if there is no other id-focus in the sentence:

(38) *Eljött kevés diák
PRT-came few student
intended: 'Few students came along.'

However, this pattern of behavior is not unique to counters. Komlósy (1994) notes a number of examples where some argument of a verb must appear in the pre-verbal focus position—unless there is another focus in the sentence occupying that position, we can add. I referred to this phenomenon as *default focusing* in Surányi (2003). Apparently, counters behave as default foci in Hungarian.[31]

Finally, post-verbal word order is affected by scrambling, as discussed in Chapter 4, where I argue that this scrambling operation active in the Hungarian post-verbal field is local scrambling having A-movement type effects. If so, we expect object counters scrambled to the left of the subject to be able to reconstruct below the subject scopally. This adds no new predictions in itself, as we have already derived the generalization that scope relations are free within the post-verbal domain. But given the proposal in this chapter that A-reconstruction is blocked by an intervening focus, it is predicted that if an object is scrambled to the left of a subject counter in the post-verbal field, then A-reconstruction of the object for scope will be blocked. To be able to test these predictions we need to use counters that are not id-foci. As they are in the post-verbal domain, this cannot be made absolutely sure, unfortunately; what we can control, however, is their prosodic form: the examples we want to consider involve counters with as neutral a stress pattern as possible. This means that both the numeral and the noun should bear at least word-level stress. With this proviso in mind, consider the following examples:

(39) a. MA oldott meg kevés diák minden feladatot S > O, O > S
today solved PRT few student every exercise-acc
'It was today that few students solved every exercise.'
b. MA oldott meg minden diák kevés feladatot S > O, *?O > S
today solved PRT every exercise-acc few student
'It was today that few students solved every exercise.'

(39a) is ambiguous, due to the option of applying QR to the object either to a position above or to a position below that of the post-verbal subject. (39b), in contrast, is extremely difficult to interpret with an inverse O > S scope. Assuming that the structure of the Hungarian vP is hierarchical (a view I advocate in Chapter 4 below), the post-verbal surface order of (39b) corresponds to basic vP structure, where the subject is higher, c-commanding the object. The subject has nowhere to reconstruct to, and the counter, not being a GQP, cannot undergo covert QR to take wide scope over the subject. This explains why inverse scope in examples like (39b) is marginal at best.[32]

Consider what happens if the scrambled object is not a counter, but a universal quantifier phrase, as in (40). Here the S > O inverse scope interpretation is degraded, however, it is significantly better than inverse scope in (39b). What is more, it is possible to construct parallel examples where inverse scope is only mildly degraded (41a), as well as examples with an indefinied object, where it is fully acceptable (41b).

(40) MA oldott meg minden feladatot kevés diák O > S, ??S > O
today solved PRT every exercise-acc few student
'It was today that few students solved every exercise.'

(41) a MA oldotta meg mindegyik feladatot kevesebb mint tíz diák O > S, (?)S > O
today solved PRT each exercise-acc few student
'It was today that fewer than ten students solved each exercise.'
b. MA hívott fel valakit kevés fiú O > S, S > O
today called PRT someone-acc few student
'It was today that few boys phoned someone.'

These results are not straightforward to evaluate. The counter subject in each case may be interpreted as id-focus (prosodic controls to exclude such an interpretation have a very weak

effect). Of course, *qua* id-focus, the counter can covertly raise to extend its scope over the scrambled object. In such a case, even though the A-reconstruction of the scrambled object to its base position below the subject is blocked, since the subject is a counter, and counters can be readily interpreted as id-foci in these examples, no systematic effect of the blocking of reconstruction can be perceived.

Summing up, what I have tried to show in this section is that the rather complex scope interaction patterns fall out in a model incorporating QR, where QR does not apply to bare numeral indefinites or modified numeral indefinites. Bare numeral indefinites can be existentially closed (non-distributive wide scope), and other NPs can A-reconstruct below them to create an inverse scope reading. Modified numerals are not cardinality predicates, but involve focus—they cannot be existentially closed, they can undergo A-reconstruction, but due to the focus status cannot be crossed over by scopal A-reconstruction themselves.

Inasmuch as the present results prove to be on the right track, besides the effects of closure and A-chains, Q-scope continues to involve QR.

6. Summary and consequences

In this chapter looked at the family of movements and positions that are related to scope-taking possibilities of different kinds of noun phrases in the clause. I have outlined a possible deconstruction of part of the syntactic template involved in cartographic approaches to the phenomena, suggesting that an alternative, and in fact more conservative, approach that directly draws on the semantic properties of the elements involved is not only less stipulative, but it also fares empirically better in accounting for the differential scope-taking options – and consequently: LF positions – available to the various classes of syntactic elements involved.

Specifically, I hope to have substantiated the following two points. First, the A-bar feature checking approach to Q-scope, which involves directed movements to functional positions in a pre-fabricated syntactic template, is both conceptually and empirically problematic (and Hungarian is far from supplying evidence in its favour). Second, when we combine the independently motivated covert scopal mechanisms of (i) QR, (ii) existential closure, and (ii) A-reconstruction, which is constrained by quantificational interveners like focus and by the Mapping Hypothesis, then the intricate pattern of Q-scope interactions is correctly predicted in an elegant manner. The alternative account presented here relies on a generalized notion of Last Resort (see Section 3.2): QR of GQPs and covert id-focus

movement of counters are triggered not by abstract null morphosyntactic features; rather, they are licensed by virtue of the interpretations they lead to.

A repercussion of the present study is that Quantifier Raising exists at the level of narrow syntax – an assumption that has recently been repeatedly challenged, perhaps most strongly in the specialized quantifier-projections approach, but also in work by Hornstein (1995). I argue here that the QR-view is essentially correct, though the domain of its application is more restricted than most commonly believed. If the analysis of Q-interaction presented here is on track, then A-reconstruction also must be available (alongside A-bar reconstruction), contra Chomsky (1995) and Lasnik (1999).

Notes

[1] Some variants of this analysis involve unselective binding of the 'specific' indefinite by a remote, maximal scope existential operator.

[2] Reinhart also argues that applying existentially bound choice function variables to plural indefinites derives their collective reading, hence such readings do not require an independent semantic treatment. This appears to be in support of the choice function analysis.

[3] A question that is still open is the treatment of existential indefinites inside an island boundary (or in lack of one), in a clause-bounded domain. Reinhart (1997) suggests that QR is available to them as well, due to her assumption that they also have a generalized quantifier (GQ) interpretation, alongside the choice-function interpretation (the GQ interpretation is due to a typically covert existential determiner). That is, she entertains an ambiguity treatment: indefinite scope is determined either via choice function application or via QR.

[4] Beghelli (1993: 66), Liu (1997: 41) (but only non-distributive wide scope is acknowledged to be available for the object QP in such examples by Beghelli and Stowell 1995).

[5] This type of examples forces Beghelli and Stowell to place DistP below AgrSP: 'fewer than four students' can reconstruct from AgrSP to VP for the inverse scope reading. If DistP were above AgrSP, then these examples would be predicted (wrongly) to invariably have the object universal scoping over the subject. The same applies if we replace the modified numeral subject with a bare numeral subject.

[6] The model shares this property with Hornstein's (1995), only Hornstein's approach attempts to reduce Q-scope to independently existing A-movements. Among various other drawbacks, Hornstein's theory also suffers from an insensitivity to differential scopal options of different Q-classes, much like the pure QR approach.

[7] Here and elsewhere 'overt HRefP' is shorthand for 'HRefP, movement to which is overt', while 'covert RefP' stands for 'RefP to which movement is covert'.

[8] The pronominal element in the topic position in (22b) is not to be construed as a contrastive topic.

[9] On the first reading, the two books co-vary with the girls, on the second reading, the two books co-vary only with the boys but not with the girls, while on the third, the two books are referentially independent.

[10] Silent 'each' in fact weakens the motivation for the Dist head as a separate head, given that other heads also contain the same Dist (or EACH) morpheme (except for the exceptional Ref).

[11] This type of examples force Beghelli and Stowell to place DistP crucially below AgrSP: 'fewer than four students' can reconstruct from AgrSP to VP for the inverse scope reading. If DistP were above AgrSP, then these examples would be predicted (wrongly) to invariably have the object universal scoping over the subject.

[12] Given that QR is non-feature checking movement on present assumptions (the QP does not bear an offending feature), it cannot even be moved by IFM (Indirect Feature-driven Movement) to edge of phases to escape upwards (cf. Chomsky 2000, 2001). Hence, a possible reasoning goes, QR cannot involve intermediate steps. Given that in a strong phase only the next lowest phase is accessible, that entails (finite) clause-boundedness. For relevant discussion on the clause boundedness issue, see Sauerland (1999).

[13] Beghelli (1993) provides the following context to make inverse scope less dispreferred. "Classes in this department are becoming incredibly tough; it has gotten to the point where maybe three students would pass. Last month has been the worst ever: two students passed four classes."

It appears considerably easier to get the distributive inverse scope reading too if we make the direct scope reading pragmatically implausible:

(i) In the gigantic polygamous wedding ceremony, two women married one hundred men

[14] The class of bare numerals may be understood to also contain the indefinite article a(n), or alternatively, this article may be taken to be a semantic determiner creating generalized quantifiers. This choice does not matter for our purposes.

[15] A usual notation for an indefinite like four classes is $\{X \mid \text{classes}(X) \,\&\, |X|=4\}$. The numeral leaves the X variable unbound, hence it is available for existential closure, therefore (non-distributive) wide scope in general is possible for unmodified numeral indefinites.

[16] A distributive operator is sometimes introduced at the point where the indefinite restriction is interpreted.

[17] Reconstruction in A-chains has recently become debated, most notably by Lasnik (1999). Boeckx (2001), however, argues strongly that A-reconstruction is available.

[18] Another piece of evidence against QR-ing bare numeral indefinites comes from Hungarian, where QR is (optionally) overt: bare numeral indefinites do not QR overtly in Hungarian (they only move to focus position) (cf. Surányi 2003).

[19] In a recent manuscript Fox and Nissembaum (2002) make use of analogous syntactic scenarios involving the interaction of A-bar reconstruction and binding Condition A (in order to show that A-bar reconstruction is narrow syntactic).

[20] The raising construction in (i) shows that this is the case. (i) has a reading according to which what is allowed is the absence of few students.

(i) Few students are allowed to be absent

[21] There is clear evidence that the numeral of non-increasing modified numeral indefinites is not interpreted as a cardinality predicate. If an example like 'There are fewer than six students in the room' is interpreted as $\exists$ X [|X|<6 & $\forall$ x of X [student(x) & in the room(x)]], then this would allow there to be more than six students as well: it only says that there is a set of less than six students, but there could be more (Beghelli 1993: 74, citing Schein 1993 and Ben-Shalom 1993). Of course such examples only indicate that they are not interpreted as a cardinality predicate, but do not explain why.

[22] The view that counting NPs are not generalized quantifiers converges with Szabolcsi's (1997) own conception too. See also de Swart (2001), Nouwen and Geurts (2007); for a treatment of unmodified few as a cardinality predicate composed with negation, see Solt (2006).

[23] It is important to note that (as is invariably the case with identificational (and contrastive) focus interpretation) the focus operator only identifies a member of the contextually relevant set, excluding the other members of that set. Thus, each sentence of (ia–c) below can well be true at the same time, since the relevant sets differ. The case is similar to that of the pair of sentences in (ii) below. (iia) and (iib) can hold at the same time, since the set of alternatives of the identification operation are non-identical in the two cases.

According to Krifka (1999), natural scales (like natural numbers and other quantities) form constant, low salience alternative sets, which are always available irrespective of the given context. Then, counting quantifiers
carry out an exclusive identification operation (i.e. focusing) on the elements of such alternative sets.

(i) a. A postás öt levelet vitt ki [=the example in the main text]
b. A postás kevés levelet vitt ki
the postman-nom few letter-acc took-3sg PRT
'The postman delivered few letters'

c. A postás hatnál kevesebb levelet vitt ki
the postman-nom fewer than six letter-acc took PRT
'The postman delivered fewer than six letters'

(ii) a. Egy SZŐKE fiú bukott meg a vizsgán
a BLOND boy-nom failed-3sg PRT at the exam
'It was a BLOND boy that failed the exam'
b. Egy MAGAS fiú bukott meg a vizsgán
a TALL boy-nom failed-3sg PRT at the exam
'It was a TALL boy that failed the exam'

[24] For instance, (i) and (ii) are not ambiguous, in the way indicated, due to the presence of the quantificational interveners not and always:

(i) Two students did not read this book
2 > Neg / *Neg > 2
(ii) Few students are always likely to be absent
few > always > likely / *always > likely > few

[25] Universal quantifiers also appear not to be able to A-reconstruct, based on examples like (8). (Apparent inverse scope in examples like Everybody didn't seem to be happy can be derived by Neg-raising above the subject, as argued by Boeckx (2001).) If this is the case, then this can be derived in at least two ways. One course to take would be to place universal quantifiers into the category of specific NPs (again, in the sense of Enc 1991), which cannot appear inside the predicate phrase at LF. Another line is to argue that subject universals need to QR above the subject position, i.e. above their highest A-position, otherwise (say, if they QR-ed to adjoin to vP) an improper chain would be created. Then QR fixes their scope above the subject position.

[26] Bruening (2001) argues within a vP-based (vs. AgrP-based) approach that direct objects in such double object constructions undergo QR to an inner [Spec,vP]. This achieves exactly the same result. Bruening argues based on the IO > DO scope freezing effect in double object sentences for a 'tucking in' effect à la Richards. However, many researchers have argued that the IO > DO scope freezing effect is one of specificity, given that the IO in double object constructions functions as the logical subject of a posessive/existential predication (cf. Brandt 2003 and references therein). Nakanishi (2001a,b) shows that IO >DO holds even island-externally, i.e. when both scope out of an island, that is, in syntactic contexts where movement cannot apply.

[27] To the extent that (i) is possible on an DO > S reading (i.e. each paper was introduced by different sets of fewer than three teachers), it indicates that indeed as it is expected, subject reconstruction below the (Case position of the) bare numeral DO is available.

(i) Fewer than three teachers introduced two of Chomsky's papers to a class of students

[28] As (i) shows, 'more than n N' can be topicalized, or can be postverbal non-focus position in Hungarian.

(i) (?Több mint száz diák) tegnap az egyetem előtt tüntetett (több mint száz diák)
more than hundred student yesterday the university outside demonstrated more than hundred student
'More than one hundred students made a demonstration outside the university'

'More than n N' corresponds to two nominal constructions in Hungarian: (ii) and (iii). (iii) differs from (ii) in that it can only stand in focus position.

(ii) több mint három diák
more than three student
(iii) háromnál több diák
three-COMPAR more student

[29] Most informants share the judgments reported here, mostly taken from the literature. However, it appears to me that there is some speaker-variation with respect to how inaccessible the bare numeral-like construal of modified numeral indefinites is. For some speakers, even 'exactly n N' and 'fewer than n N' can (rather marginally) be forced to be construed the same way (Gilliam Ramchard, p.c.).

[30] In this chapter I restrict my attention to covert QR, and put the overt fronting of GQ-phrases to one side. We return to a possible treatment of GQP-fronting in Chapter 3.

[31] It appears plausible that focusing is available to counting quantifiers as a default, because focusing does not change truth conditions in the case of these quantifiers (these quantifiers do not acquire or lose readings under focus, as pointed out by Beghelli 1993: 77). See É. Kiss (2006) for insightful relevant discussion.

[32] Needless to say, if kevés 'few' is pronounced emphatically, as would be the case on its id-focus interpretation, then inverse scope becomes possible. For some speakers, a further requirement for the inverse reading is stress eradication applied to the subject expression.

Chapter 3
An interface account of focus movement

1 Introduction

1.1 Objectives

So far in the dissertation, in the main we have looked at word order alternations deriving from different kinds of movement that are not directly related to discourse structure, or information structure. In this chapter we investigate both overt and covert forms of focus movement in Hungarian to establish the nature of its trigger in both of these forms, and to determine the factors, whether narrow syntactic or properties of the interfaces, that are responsible for the word order restrictions as well as the degree of flexibility attested in both its overt and its covert syntax.

Current mainstream transformational syntax draws heavily in its account of discourse-related movements on two key classes of syntactic objects: (i) discourse-related functional heads, determining syntactic positions for the moved elements as a function of their own location in the clausal hierarchy, and (ii) discourse-related uninterpretable features, triggering movements to these positions (see also Chapter 1). In other words, it extends this descriptive machinery to discourse-semantically significant word order alternations due to syntactic movements. Elements coming to occupy the respective syntactic positions thus defined are correlated with some special discourse status.

To be able to account for the interaction of, and differences between, a number of movement operations yielding distinct discourse-semantic effects, primitives of type (i) and type (ii) are multiplied, leading to what has come to be referred to as the 'cartographic approach' (CA) to discourse-related movement, and to syntax at large (for cartographic accounts of the left periphery in particular, see e.g., Rizzi 1997, Poletto 2000, and papers collected in Rizzi 2004). As pointed out in Chapter 1, the CA operates with a substantially extended set of functional head elements F, determining a fixed syntactic template of

positions in the syntax of natural languages. Functional heads F are specified for features that establish the (absolute) position F occupies in the syntactic hierarchy, which in turn determines the (absolute) position that elements featurally associated with F can occupy.

The postulation of (i) discourse-related functional heads and (ii) discourse-related uninterpretable features raises disturbing methodological and empirical issues, some of which were pointed out in Chapter 1 above. Many of these are not specific to the syntax of discourse-related movements, but are of a more general nature (e.g., see Newmeyer 2008, Craenenbroeck 2009). From our present empirical perspective, the property of genuine word order flexibility, pervasive in natural language and widely attested even within Indo-European, the language family that the CA has mostly drawn on, substantially weakens the descriptive motivation for the postulation of various functional projections. This is so because crucial support for a functional head/projection F/FP ideally comes from the fixed absolute position of a given class of elements that are assumed to be associated with F/FP.

The integration of discourse-related movements into the minimalist feature-checking model of syntactic movement faces difficulties of its own. Although some of these were briefly discussed in Chapter 1, it is worth spelling them out here in the present context of discourse-related movements. Questions arise regarding the morphosyntactic status of interpretable and uninterpretable discourse features driving this movement type. The general probe–goal framework of movement (Chomsky 2000, 2001) requires the postulation of uninterpretable morphosyntactic features both on the moved element and on the functional head F licensing the position to which movement takes place. The resulting unwieldy representations exhibit a massive redundancy. One aspect of this redundancy is that, for instance, an uninterpretable [u.top] feature is only ever present on the Top head, and Top always bears [u.top]. Another aspect concerns the manner in which the discourse status of the given element undergoing displacement is determined for the purposes of the interpretive systems. A fronted topic phrase, for instance, is identified as a topic by at least three aspects of the representation. A topic phrase (a) carries an interpretable [top] feature, (b) it is in a specifer/head relation with a functional head of the category Top, (c) and it is in a local configuration (of, say, minimal c-command) with some interpretable feature on Top – assuming that the mutuality of checking in the phi-/tense-system, advocated by Pesetsky and Torrego (2004), is generalized to the (split) C-domain.[1] This is a perplexing deviation from optimal design: on minimalist assumptions, the representations generated by syntactic computations are expected to contain no more than what is sufficient for the representations to be appropriately interpreted by the interface systems (‘usability’).

As pointed out before, with its rich left periphery routinely targeted by overt discourse-related movements, Hungarian is among the languages where the descriptive success of an account in terms of (i) discourse-related functional heads and (ii) discourse-related uninterpretable features has been best demonstrated (e.g., Szabolcsi 1997, Puskas 2000, É. Kiss 2002). Against such a background, this chapter aims to sketch an alternative approach to the syntax of so-called focus movements in Hungarian that dispenses with both (i) and (ii), and hence with the complications they give rise to. The account to be pursued here relies crucially on a syncategorematic interpretive rule applying at the syntax–semantics interface, which can be triggered provided that its templatically defined input requirements are met. (For the closely related notion of an interpretive template and for general discussion, see Neeleman and Koot (2008), who treat Dutch A- and A-bar scrambling based on 'discourse templates.') I will keep to the assumption that such interpretive rules are locally compositional (essentially, 'modes of composition' in Chung and Ladusaw's (2004) sense), and that they are based on relative syntactic configurations (as opposed to absolute syntactic positions). The present study explores how much of the rather complex A-bar syntax of syntactic focusing in Hungarian falls out from one such templatic interpretive rule giving rise to an identificational predication meaning, when the interplay of that interpretive rule with independent general principles of grammar is appropriately taken into account.

The analysis is shown to derive the crucial syntactic properties of Hungarian focus movement, both in single focus and multiple foci constructions, including its possible landing sites, and the overtness or covertness of the movement chains it creates. The relation of focus movement to verb inversion, and its syntactic interaction with other elements in the clause are also examined. The approach is argued to yield a model that is superior to the mainstream CA analysis both empirically and methodologically, as it allows exactly the required type and degree of flexibility in the syntax of this discourse-related movement operation.

The chapter is structured as follows. The remainder of this section provides some background, and situates the issues investigated in the chapter in the context of the main themes of the dissertation. Section 2 reviews some facts of word order and interpretation that are central to the study of the syntax of focus in Hungarian, and points out some empirical issues that their current cartographic accounts face. It is argued that if such accounts are to be descriptively adequate in a broader than usual empirical domain, they need to be amended by multiplying dedicated functional projections, leading to an account where the initial motivation for the very postulation of those projections is undermined. In section 3 I introduce a syncategorematic interface template for identificational focus interpretation, a rule

of the syntax–SEM mapping. Section 4 spells out how the syntax of focus fronting in Hungarian is accounted for without relying either on a position dedicated specifically to (identificational) focus within a syntactic template of absolute positions, predicting its syntactic properties based on the interaction of this interpretive template with general principles of economy, the Focus–Stress Correspondence principle, and properties of the Hungarian clause independent of the grammar of focus. Section 5 explores how different aspects of the syntactic flexibility of focus movement fall out on the proposed account. Section 6 examines in what way the account could extend to the apparently optional fronting of distributive universal (and some other) quantifier phrases. Section 7 concludes with a summary of results and a brief outlook.

1.2 Background

1.2.1 Notions of focus

Focus in the most general sense is commonly thought to subsume phenomena of prosodic prominence paired with pragmatic and/or semantic functions of interpretational prominence. What exactly the nature and proper analysis of this 'interpretational prominence' is has been a subject of continued research. The leading account of this correlation of phonological and semantic/pragmatic prominence is one where it is mediated through syntax in terms of a syntactic focus feature: it is this syntactic focus feature which is interpreted in phonology and in semantics/pragmatics as associated with the respective properties characterizing focus (this interpretive genre of account dates back at least to Jackendoff 1972).

In the PHON interface component, the prominence is typically manifested in terms of a pitch accent located within the focused expression (although other phonological/phonetic correlates are also attested). The interpretational effects are much murkier. The focus structure of a sentence is intimately related to discourse. In one approach, the focus of a sentence is the discourse-new part (vs. discourse-old). Sometimes (in some languages) discourse-old elements (also called theme) are separated from discourse-new elements (also called rheme) syntactically at the surface—languages that are strictly sensitive to (a form of) this distinction are (to varying degrees) discourse-configurational (i.e. the syntax of their sentences is determined partly by discourse properties of the elements involved). Such a distinction is a central one in the Prague school (cf. e.g. Hajicova 1984, Hajicova and Sgall 1987). In fact, most typically, discourse-old and discourse-new are not syntactically isolated in the shape of distinct constituents in surface sentence structure. In different terminologies, distinctions

similar to the one at issue are also called topic/comment, topic/focus, presupposition/focus, focus-frame/focus, or background/focus. However, it appears that not all of these pairs of notions cut the information structure of the sentence in the same way.

There are at least two distinct pairs of notions that are necessary, as Partee (1991) and Krifka (1991) point out. One is what can be referred to as topic/comment. This arises in sentences where topic is 'locally' marked (to follow Partee's phrasing), typically by fronting a constituent (or several constituents). These topicalized constituents are strictly discourse-old/'given' and function as logical subjects of a predication (É.Kiss 1991, 1994; see also Kiefer and Gécseg 2009). The rest then is the comment. A second, independent distinction is that commonly referred to as focus/background, with one (or more) locally marked focus element(s). The background part is presuppositional. Depending on the approach to these notions one opts for, neither the comment of the topic, nor the background of the focus need be a surface syntactic constituent (vs. the focus, cf. Krifka 1991: 152–153). If they are analysed (at some representational level, as in Hajicova and Sgall 1987) as a constituent, in semantic terms they are open expressions.

Hungarian is known to be distinctly discourse-configurational (cf. e.g. É.Kiss 1995). In this language both topic/comment and focus/background divisions are reflected in surface syntax. Topics precede the comment, and (structural) focus precedes the background. The first obligatory accent falls on the first element of the comment; i.e. topics do not bear an obligatory accent (e.g., É. Kiss 1994a).

In fact, we are dealing with two distinct types of focus. As emphasized in a seminal paper by É.Kiss (1998), in the literature on focus we frequently face a pervasive and confusing lack of differentiation between these two types. The two kinds are often called narrow or contrastive focus and wide or presentational focus (cf. Halliday 1967, and in particular, Rochemont 1986); É.Kiss (1998) uses the terms identificational focus and information focus.[2] Information focus is characterized by a different set of syntactic and semantic properties than identificational focus. Information focus must be discourse-new, while identificational focus may or may not; in Hungarian, information focus does not undergo obligatory syntactic movement, identificational focus does. Information focus does not correlate with a truth-conditional difference compared to the neutral sentence variant, while identificational focus does.[3] One aspect of the truth-conditional impact of indentificational focus concerns exhaustivity, and the other focus-sensitive particles. It has been a long-standing observation that Hungarian preverbal focus (i.e. identificational focus)

results in 'exclusion by identification' (cf. Kenesei 1986, Szabolcsi 1994; see especially Szabolcsi 1981, who shows that Hungarian preverbal focus is exhaustive.[4]

1.2.2 Two types of multiple foci

Syntactically, Hungarian, in contrast to languages such as Italian or Korean, exhibits constructions involving multiple identificational foci, illustrated in (1):

(1) a. *JÁNOS evett meg csak KÉT SÜTEMÉNT.*
J. eat-PAST.3SG PRT only two cookie-ACC
'It was John who ate only two cookies.'

b. *JÁNOS hívta meg egy sörre PÉTERT,*
J. invite- PAST.3SG PRT a beer-to P.-ACC.
és nem PÉTER (hívta meg egy sörre) SANYIT.
and not P. invite- PAST.3SG PRT a beer-to S.-ACC
'JOHN treated PETER to a beer,
and it's not the case that PETER treated ALEX to a beer.'

As argued by Krifka (1991), multiple foci constructions can receive one of two possible interpretations (see also van Hoof's (2003) analogous distinction between 'conjoined' focus and 'matching' focus, adopting Comorovski's (1996) terms for the two major types of multiple questions). One interpretation, coined 'complex focus' in Krifka (1991), involves two phonological foci, but only one semantic focus, i.e. the alternatives are (ordered) pairs (as in *John only introduced SUE to BILL*). 'True multiple foci' constructions involve the application of two (or more) focus operators at two (or more) points of the semantic derivation (as in *Only JOHN fell in love only with SUE*). The distinction exists in Hungarian: in fact (1b) above is a case of a 'complex focus', while (1a) is an instance of true multiple foci.

I argued in Surányi (2003, 2007) that Hungarian differentiates the complex focus interpretation from the true multiple foci interpretation (see Krifka 1991) in its covert syntax in that the *in situ* focus is moved to the site of the preverbal focus on the complex focus interpretation, while this is not so on the true multiple foci meaning. However, on this latter meaning too, there is syntactic movement of the focus, only this movement targets a position that is lower than that of the preverbal focus. The former part of the proposal converges with Krifka's (1991, 2004) view, who argues that in sentences with multiple foci with a complex

focus interpretation, the focus itself is an Absorbed pair (or more generally, an *n*-tuple), extending the basic account (of multiple *wh*-questions, and other multiple quantifier structures) proposed by Higginbotham and May (1981) and May (1989) to the complex focus reading.[5]

My proposal was based on arguments including the following generalizations. First, the complex focus interpretation, where the first focus does not distribute over the second, is not available when the second focus cannot move to the position of the first due to an island boundary or a (Beck-type) quantificational intervener (Beck 1996), or when the second focus moves (overtly or covertly) to a position lower than that of the first.

Second, a post-verbal, second focus in a 'true' multiple foci construction, where it is scopally unrelated to the pre-verbal focus, can also take distributive inverse scope, similarly to post-verbal iQPs (see Chapter 2). In particular, it can take wide scope both over a post-verbal iQP, and over another post-verbal id-focus. However, in contrast to a post-verbal iQP, its scope cannot be wider than that of the pre-verbal focus, nor over a pre-verbal iQP (see e.g., Surányi 2003, 2007 for ample illustration). The available scope options are summarized abstractly in (2) below:[6]

(2) a. *FOC$_1$ V …iQP …FOC$_2$…*
^{OK}FOC$_1$ > iQP … > **FOC$_3$** / ^{OK}FOC$_1$ > **FOC$_3$** > iQP

b. *FOC$_1$ V … FOC$_2$ …FOC$_3$…*
^{OK}FOC$_1$ > FOC$_2$ > **FOC$_3$** / ^{OK}FOC$_1$ > **FOC$_3$** > FOC$_2$

Surányi (2003, 2007) argues that the second focus in a construction involving true multiple foci takes inverse scope via covert movement. Indeed, it is not possible for a second, independent focus to inversely scope out of an island. In (3) the second focus is in situ in a complement infinitival clause, and the sentence is fine, while it is located in a purpose adjunct infinitival clause in (4), and the sentence is severely degraded.

(3) Miért nem akar le vizsgáztatni csak HÁROM DIÁKOT
why not wants PRT examine-inf only three student-acc
^{OK}only three > not:
'Why are there only three students that she does not want to examine?'

(4) Miért nem kelt fel le vizsgáztatni csak HÁROM DIÁKOT
why not got up PRT examine-inf only three student-acc
*only three > not:
'Why are there only three students such that she got up in order to examine them?'

In Surányi (2007) I contended that on the multiple foci reading, the post-verbal focus undergoes (covert) movement across the board, i.e., even when it does not take inverse distributive scope over some other scope-sensitive element. Suggestive indirect support for this view comes from bi-clausal multiple foci constructions with one main clause focus, associated with its own focus particle (e.g., *csak* 'only'), and another focus within the embedded (indicative or subjunctive) complement clause. In such bi-clausal constructions, for a 'true multiple foci' interpretation the focus in the embedded clause must be overtly fronted to a pre-verbal focus position within the embedded clause. The 'true multiple foci' interpretation is not available in case the second focus remains *in situ* in the embedded clause. Since a 'true multiple foci' interpretation is forced by the two independent focus particles, the result is plain ungrammaticality.

(6) a. **Csak KÉT TANÁR szeretné, hogy kirúgjanak csak KÉT DIÁKOT.*
only two teacher would.like that PRT-expel- SUBJ.3SG only two student-ACC
'Only TWO TEACHERS would like to get only TWO STUDENTS expelled.'
b. *Csak KÉT TANÁR szeretné, hogy csak KÉT DIÁKOT rúgjanak ki.*
.

With this much background we can now turn to briefly discuss assumptions of cartographic approaches to focus movement in Hungarian, and the outstanding issues they raise. Further empirical properties of the construction will be introduced as we go along.

2 Focus movement in cartographic approaches to Hungarian

In Chapter 1 Section 3.2, we reviewed the basic empirical word order generalizations pertaining to the distribution of major types of elements in the pre-verbal field of the Hungarian clause, and illustrated their cartographic treatment by presenting a few representative cartographic accounts. A summary of the basic surface word order generalizations (relevant for the purposes of the present chapter) regarding containing a finite verb and a verbal modifier (VM) is given for convenience in (6):

(6) (iQPs) > (negation) > id-focus > (negation) > V > VM

The received view is that pre-verbal focus is not presentational/information focus: it is of the exhaustive/identificational variety (hence the short form id-focus; see Szabolcsi 1981, É. Kiss 1998a, Bende-Farkas 2006), and may or may not be contrastive. It also appears relatively uncontroversial that it gets to its pre-verbal position by a syntactic movement obeying islands and licensing parasitic gaps (e.g., Puskás 2000, É. Kiss 2007b). The fronting of id-focus is analyzed in cartographic accounts as movement to a non-recursive specialized projection FocP (i.a. Brody 1990a, 1995, Puskas 1996, 2000; Szabolcsi 1997; É. Kiss 2002, 2008; Kenesei 2009). Horváth (2000, 2007) proposes to replace FocP housing foci with EI-OpP, which attracts to its specifier expressions with an appended EI-Op, i.e., id-focus expressions.

In a neutral clause the finite verb is immediately preceded by the verbal modifier, if there is one.[7] In clauses with a fronted id-focus, the VM > V order is inverted to V > VM. Id-focus–V adjacency is typically analyzed as arising from a specifier–head configuration in the functional projection dedicated to id-focus. The inverted V > VM order is frequently accounted for as being due to V-movement to the Foc head; see, for instance, Brody (1990a, 1995), Puskas (2000). Szabolcsi (1997), Brody and Szabolcsi (2003) and É. Kiss (2002) do not posit an *extra* step of V-movement in clauses with a fronted focus; for them, when id-focus is present, the verb and id-focus are not housed in the same functional projection (it is not clear though whether they are able to derive the adjacency of id-focus and the verb from basic properties of the grammar). Even though in an assertive clause the finite verb immediately follows the id-focus, in a negated clause clausal negation can intervene.

The movement of increasing distributive quantifier phrases (iQPs, for short) to the position marked as '(iQP)' in (1) above is arguably optionally overt or covert; see Brody (1990a), Surányi (2003, 2004a, b).[8] More than one iQP can appear to the left of pre-verbal focus, while pre-verbal focus itself is non-recursive: only one id-focus expression can precede the verb.

(7) a. Marinak Jánost AZ IGAZGATÓ mutatta be
M.-dat J.-acc the director-nom introduced PRT
'As for Mary, (and) as for John, it's the director who introduced him to her'
b. *Marinak JÁNOST AZ IGAZGATÓ mutatta be

The first issue to be noted here for the cartographic account of focus movement in Hungarian concerns the explanation of why it should exist in the first place. There is no morphosyntactic evidence for a formal featural trigger in terms of feature checking, though uninterpretable features can readily be posited (see Chapter 1). That, needless to say, does not constitute an explanation, however. If, on the other hand, there is a (discourse-)semantic reason for the movement taking place, as is arguable, and has been argued (e.g., Horvath 2000, 2007; É. Kiss 2006), then the featural trigger ([EIOp] and [pred], respectively) are in fact redundant. A second question relates to the landing site of focus movement, which is left without an explanation on the cartographic analyses, and it is not related to the interpretation of id-focusing either. Further, given that covert focus movement may target a whole variety of positions (below that of the pre-verbal focus; see Section 1.2.2, esp. (2)), the functional projection dedicated to focus has to be posited all over the place. That this is not due to some type of non-configurationality characterizing elements merged in the post-verbal region generally (cf. É. Kiss 1994a) is argued in Chapter 4 below. But if the relevant functional projection may be generated in any position, then that in itself undermines the motivation for the functional projection in the clausal hierarchical syntactic template in the first place, since that motivation, in the case at hand, stems primarily from the putative rigidity of the absolute positions that focus can occupy in the (overt or covert) syntactic structure.[9]

Furthermore, an account of focus movement in terms of feature-checking in a dedicated functional projection cannot explain the 'distribution' of overt and covert focus movements within the sentence: the fact that the focus that has the other foci in its domain raises overtly, while the movement of all further (i.e., lower) foci remains covert. If the relevant feature attracting the focus to the pre-verbal position is "strong," then why must all further instantiations of the same functional projection bear the same feature in a "weak" form?

In what follows I explore an alternative account of the syntactic properties of focus in Hungarian that relies neither on dedicated functional heads in the clausal hierarchy, nor on an uninterpretable focus feature functioning as a probe that triggers feature-checking. Rather than postulating such dedicated syntax-internal devices, the alternative presented below crucially exploits the interface properties of id-focus elements, and the interaction of these properties with independent properties of the basic syntax of the Hungarian clause.

3. An interface configuration for identificational focus

At the semantic interface, clauses with an id-focus are interpreted as expressing identification as suggested by Chomsky (1976) regarding focus in general, and by Szabolcsi (1981) regarding id-focus in Hungarian in particular. I argue below that in order to receive an id-focus interpretation, the focus element needs to appear in a specific syntactic configuration. The syntactic movement of the focus element establishes precisely the syntactic configuration required for identificational focus interpretation. In terms of Chomsky (2001, 2004, 2005, 2008), its movement is licensed by the interpretation thus achieved.

3.1 Identificational focus and identificational predication

In many languages of the world focus correlates with overt syntactic movement(s) (beside prosodic prominence of the focused element). Prototypically, it is the semantic focus of the clause (or a category properly containing it) that undergoes movement.[10] A prominent line of research is based on the assumption that the syntax of focus invariably involves syntactic movement, whether in a syntactically overt or covert form (e.g., Tancredi 1990, 2004, Drubig 1994, Krifka 1996, 2006, Wagner 2006; cf. Chomsky 1976). Adherents to the uniform movement based approach have suggested that it is precisely the syntactic displacement of the semantic focus that derives a syntactic representation that can more or less directly feed semantic rules of focus interpretation.

On a structured meanings approach (von Stechow 1981, Jacobs 1984), the movement of the semantic focus turns it into an argument of the background. More precisely, focus meaning in general involves ordered pairs of elements, where the semantic focus and its background correspond to the two members of the ordered pair, and the background is applied to the focus as its argument in a manner determined by a(n overt or covert) focus operator (e.g., Krifka 1991, 2006).[11]

An alternative option that has been explored, and the one that will be adopted in this paper, involves a similar partitioning, but with reversed semantic types: it identifies the semantic focus as having the semantic function of a predicate that applies to the background as its argument (focus has also been desrcribed as the main predicate of the sentence). The predicational view of focus goes back to the work of Herman Paul, who identified the focus as the 'psychological predicate' and the nonfocused part as the 'psychological subject.' More recent formulations of this basic view include Ogihara (1987), Szabolcsi (1994) and É. Kiss (2006, 2007b) (see Herburger 2000 for a broadly similar conception, employing appropriately

structured Davidsonian representations). Ogihara (1987) proposes, using Partee's (1986) *ident* and *iota* type shifting operators, that a *ga*-marked focus element in Japanese is type shifted from an individual type into a predicate type and the nonfocused part is type shifted from a predicate type into an individual type (a definite description). In other words, focusing of the *ga*-marked constituent effectively reverses the asymmetric argument–predicate relation holding between it and the rest of the sentence: it will be the *ga*-marked focus element, an identificational predicate, that applies to the rest of the clause as its argument. To illustrate, (the Japanese *ga*-focus counterpart of) *JOHN came* receives the interpretation along the lines in (8).

(8) a. [**j** [λx.came(x)]] → *ident*(**j**): λy[y = **j**], *iota*(λx.came(x)): ιx.came(x) →
b. λy[y = **j**](ιx.came(x)) →
c. ιx.came(x) = **j**

The identificational semantics for focus involved in (8c) goes back to Chomsky (1976), and is akin to that advanced by Szabolcsi (1981). Importantly, according to Szabolcsi (1981) (and Kenesei 1986), and as argued forcefully by É. Kiss (1998a), identificational semantics is not a property of all kinds of focus, but is limited to what is termed exhaustive or identificational focus (as opposed to presentational/information focus; for the distinction, see e.g., É. Kiss 1998a). If so, then the analysis of focus as an identificational predicate, first proposed explicitly for Hungarian id-focus by Szabolcsi (1994), is also limited to identificational focus.[12] This basic view will be adopted in what follows. The notions of focus and identificational focus are kept apart throughout. As for the (general) notion of focus, I will follow the alternatives based approach (Rooth 1985, 1996; Büring 2007), according to which the interpretation of focus involves semantic alternatives of the focused element. This latter choice is not vital for the purposes of the paper; what is crucial, however, is that the notion of identificational focus is related to the notion of focus as a special subcase.

Ogihara (1987) suggests that a clause with *ga*-marked focus in Japanese is equivalent in terms of its truth conditions and felicity conditions to a (specificational) pseudocleft in languages like English. Independently, but in the same vein, É. Kiss (2006, 2007b) takes Hungarian id-focus to be interpreted as a specificational predicate. What makes this claim plausible is that what appears as a specificational predicate in English manifests itself in Hungarian as an id-focus, which in single focus sentences must occupy the pre-verbal slot:

(9) A polgármester JÁNOS volt
the mayor J-nom was
'The mayor was John.'

3.2 The Hungarian id-focus construction is not a specificational copular clause

Despite the basic interpretational parallelism of the two constructions, the details of their semantics, as well as their syntax render them manifestly different. A crucial syntactic difference is that the focus phrase in the Hungarian id-focus construction (HFC) is related to a gap in the background directly by movement (see a.o. Puskas 2000, É. Kiss 2002). The same does not hold of specificational sentences of English, assuming standard restrictions on movement (though see Boskovic 1997, Heycock and Kroch 2002). Instead, according to what can be considered the most successful analysis currently available, specificational sentences are self-answering questions in disguise (e.g., den Dikken et al. 2000, Schlenker 2003, Romero 2005), whose subject is a (possibly concealed) question, to which the post-copular focus element provides a (possibly concealed, partially elided) syntactically complete clausal answer.

The fact that the HFC involves the direct syntactic movement of the focus phrase has a number of repercussions that render the HFC different from specificational copular clauses; among them the following. (i) Only constituents that can undergo fronting can be a focus. Constituents as big as a VP or IP, which can function as the focus in English specificational sentences, cannot be fronted within a clause in Hungarian. The HFC is restricted to constituents smaller than these. (ii) Only one tense specification is present in the HFC, while specificational pseudoclefts involve two potentially independent tenses (one marked on the copula, and one in the clefted clause). (iii) The focus can be an idiom chunk in the HFC, which is not available in specificational copular clauses. (iv) In the HFC, a quantifier in focus may receive a wide scope interpretation with respect to quantifiers in the background, while the same is impossible in specificational copular sentences.

These differences make any attempt to reduce the *syntax* of HFC to the English specificational copular construction (SCC) highly implausible: the HFC is a simple movement construction, while the SCC involves the base generation of two (clausal) constituents.

3.3 The Hungarian id-focus construction and the English SCC

At the same time, the parallel between the HFC and the English SCC goes beyond the simple interpretive correspondance illustrated in (9) above. First, the specificational predicate is the

focus of English specificational sentences (a.o. Akmajian 1979, Higgins 1979, Partee 1998/2000, Heycock and Kroch 1999, 2002), by rules determining the default focus. Similarly, the fronted element is the focus in the HFC.

Second, both in Japanese and in Hungarian, the id-focus has an exhaustive interpretation, and an existential presupposition is associated with the background. For a defense of the claim, due to Szabolcsi (1981), that Hungarian id-focus is interpreted exhaustively, see Bende-Farkas (2006) and É. Kiss (2009c). For a discussion of the existential presupposition associated with the background of id-focus in Hungarian, see Bende-Farkas (2005).[13] English specificational clauses are also characterized by exhaustivity, and the background too, realized as the grammatical subject, gives rise to an existential presupposition.[14] On Ogihara's account, the latter are consequences of the identificational predication interpretation that is involved in both types of constructions: the exhaustivity effect is a result of semantic identification itself, while the existential presupposition is projected by the background, being interpreted as a (type-shifted) definite expression.[15] Indeed, the assumption that English-type specificational copular clauses have identificational semantics is shared by most leading semantic accounts of this sentence type (see a.o. Jacobson 1994, Sharvit 1999, Heycock and Kroch 1999, Partee 1998/2000, Schlenker 2003, Heller 2005, Romero 2005). The copula itself is typically identified as the source of identificational semantics.

The correspondence between the two construction types does not mechanically extend to the expression that functions as the semantic argument of the specificational predicate, however. The interpretive options available to this semantic argument are significantly narrower in English than in Hungarian, as shown below. This is not reason enough, however, to discard the analysis of the two constructions as having essentially the same semantic interpretation, since these differences reduce to the fact that the HFC allows for more flexibility in information structure than the English SCC.

In English the semantic argument of the specificational predicate functions as the grammatical subject, and hence it is interpreted by default as a topic (cf. den Dikken et al. 2000, Geist 2007). Even though the same argument may become a syntactic topic and be interpreted as a topic in Hungarian (which is not a subject-prominent language), it may remain in a neutral post-verbal position, where no topic interpretation is associated with it; see (9) and (10), respectively. As a result of this, predicative expressions that are not felicitious as the semantic argument of a specificational predicate in English due to the default topic interpretation associated with them (see Mikkelsen 2005) may be found as the semantic

argument of a corresponding specificational predicate in Hungarian; see (11) vs (12) (examples adapted from Heycock and Kroch 1999).

(10) JÁNOS volt a polgármester
J-nom was the mayor
'The mayor was John.'

(11) a. JÁNOS volt orvos
John-nom was doctor
'(The one who was) a doctor was John.'

b. JÁNOS volt az, ami szeretném, hogy legyen
John-nom was that-nom what-nom would.like-1sg that be.subjun-3sg
'It was John who was what I wanted him to be.' (e.g., honest)

(12) a. *A doctor was John

b. *The one thing I have always wanted a man to be is John (namely, honest)

The specificational predicate is not necessarily the *main* focus in Hungarian: it can be a post-verbal second occurrence focus in case the sentence has a different main focus, which can scope over it by moving yet higher in the structure, as in (13a,b). The main focus may be the semantic argument of the specificational predicate itself, as in (13a,c). The focus structure involved in the latter type of example is degraded in the English specificational clause (14).[16] While in English too the specificational element functions as a focus, the grammatical subject semantic argument of the specificational/identificational predicate is strongly preferred to be interpreted as a topic.[17]

(13) a. A: A falutokban JÁNOS volt a polgármester?
the village-poss.2pl-in J-nom was the mayor
'Was the mayor John in your village?'

b. B1: Nem, A SZOMSZÉD FALUBAN volt JÁNOS a polgármester.
No, the next village-in was J-nom the mayor
'No, the mayor was John IN THE NEXT VILLAGE.'

c. B2: Nem, a falunkban A TŰZOLTÓKAPITÁNY volt JÁNOS.
No, the village-poss.1pl-in the fire chief was J-nom
'No, THE FIRE CHIEF was John in our village.'

(14) a. Is the mayor Sam?

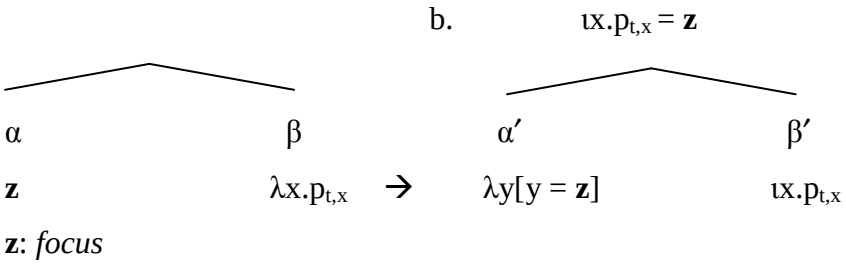
b. *No, the FIRE CHIEF is Sam. (example and judgment from Williams 1997)

We can conclude that the differences in the interpretive options between (11a) and (12a), (11b) and (12b), and (13c) and (14b), respectively, can be reduced to the topic function of the subject in English specificational clauses, hence these differences question neither the identificational analysis of English specificational clauses, nor the semantic assimilation of the English specificational sentence and the Hungarian focus construction.

3.4 The interface template for identificational focus interpretation

Revising his earlier exclusively formal feature checking based approach to syntactic transformations, Chomsky (2001, 2004, 2005, 2008) suggests, drawing on work including Fox (1998, 2000) and Reinhart (1995, 2006), that Last Resort is also satisfied by a syntactic movement M if M results in an interpretation at the SEM interface that is not available to a syntactic representation lacking M (adopting Fox's term, call this Semantic Economy). Clearly, discourse related movements are potential cases in point. I propose that HFM is indeed licensed by the interpretation it yields in SEM. In particular, by bringing the focus element to appear in the interface configuration that it does, it enables the focus element to be interpreted as an identificational focus. To model this conception, I adopt Ogihara's (1987) account formulated in terms of type-shifting by the ident and iota type shifters. Specifically, I propose that for a focus element α, α belonging to the type of individuals, to be turned into an identificational focus, its sister β must be an open proposition that is a predicate mapping from individuals to truth values. If this interface template is satisfied, type shifters will apply, resulting in a reversal of the original predicate–argument relation in the manner sketched below:

(15) *Interface template for identificational focus interpretation*



For the present purposes I am adopting an account of natural language tense in terms of quantification over temporal variables. In (15) $p_{t,x}$ stands for a core proposition (in the Montagovian sense, see Montague 1973, Dowty 1979) that incorporates a time variable *t*, an argument of the verb, of which it is part, and an individual type variable *x*.[18] Note that in the core proposition $p_{t,x}$ the time variable is not bound by a tense operator within $p_{t,x}$.

(15) is sufficiently general to cover not only the HFC but also the English SCC. If the question-in-disguise account of specificational clauses cited above is correct, the subject of the SCC is (at least) of a propositional size. On a Kartunnen-type approach to the semantics of questions, a question is a set of propositions (the set of true answers), in the lambda-calculus: a predicate of propositions. The grammatical predicate phrase of the SCC includes a full clause, which provides the answer to the question in the subject, i.e., the predicate phrase contains a proposition. In terms of (a generalized version of) (15a), in this configuration α corresponds to the post-copular clause (of which only one element is overt), while β is the subject expression. The only difference from (15a) is that here we have elements of a propositional type in place of elements of an individual type. Type shifting by a (generalized) iota type-shifter then turns the subject (=β) into a unique proposition. A (generalized) ident type-shifter shifts the predicate phrase (=α) to an identificational predicate of propositions.[19] The interpretation we get can be paraphrased as 'The unique (maximal) true proposition serving as an answer to the question expressed in the subject phrase is the proposition expressed in the (elliptical) post-copular clause.' A welcome consequence of this is that it derives the mandatory exhaustive interpretation of the post-copular answer (see Schlenker 2003).[20]

Finally, a note is in order on the applicability of the applicability of (15). It is important to bear in mind that the structure in (15a) is in principle fully interpretable. If the configuration in (15a) is derived through movement of α out of β, then two scenarios need to be distinguished. If the transformation is motivated by feature checking, then Last Resort is satisfied trivially, and the grammar is free to interpret (15a) without further ado. However, if the movement does not perform feature checking, then it is legitimate with respect to Last Resort only if it results in an interpretation that is not available without the movement (see Chomsky 2001 et seq). Since the movement of an element of type *e* (the type of individuals) does not in itself affect the semantic interpretation of the sentence, applying the interpretive interface rule in (15) becomes critical, as applying (15) can legitimize the movement.

4. An interface account of identificational focus

In this section we consider how the interpretive template in (15) interacts with the rest of the grammar, conspiring to derive the elementary syntax of the HFC. The general properties of the grammar that will play a role in the account include the Focus–Stress Correspondence requirement, and several manifestations of computational economy. We begin by reviewing the basic syntactic and semantic features of Hungarian clause structure that are independent of the grammar of focus, as the analysis of the HFC is set against this background. First the structure of the neutral clause (a declrative clause containing neither focus, nor negation) is presented, and this is followed by the structure of non-neutral clauses.

4.1 The core syntax and semantics of the neutral clause

The grammatical subject does not surface in a dedicated Case position in Hungarian (see É. Kiss 1987, 2002). Instead, it is the verbal particle, or more generally: Verbal Modifier (VM; see Footnote 4 above), that must occupy a fixed syntactic position to the immediate left of the finite verb in a neutral clause. Constituency tests reveal that both the VM and the verb are outside *v*P at surface structure (see Surányi 2009 for an overview). This word order restriction is often modeled by moving the VM to the specifier position of some functional projection whose head is filled by the raised verb. In Puskás (2000), É. Kiss (2002) and Surányi (2003), this projection is taken to be AspP, and in É. Kiss (2008b), Surányi (2009), it is equated with TP. The structure of the basic neutral finite clause given in (16) follows the latter analysis, though both the VM and the verb pass through an AspP projection located below TP. The phi-features of T may be taken to be satisfied either by pure Agree with the subject DP or by overt V-to-Asp-to-T movement, the choice being immaterial for present purposes. T is endowed with an "EPP" property, which is not satisfied by verb raising. Instead, it is satisfied by pulling up the XP_{VM} in Spec,AspP.[21]

(16) a. $[_{TP}\ XP_{VM}\ [_{T}\ V]\ [_{AspP}\ \sout{XP_{VM}}\ [_{Asp}\ \sout{V}]\ […]]]$

b. $[_{TP}$ El $[_{T}$ küldte$]$ $[_{AspP}$ el$_{\sout{VM}}$ $[_{Asp}$ ~~küldte~~$]$ […]]]

El	küldte	János	a cikket	Dávidnak
PRT	sent-3sg	John-nom	the paper-acc	David-to

'John sent the paper to David.'

This brief outline of the elementary syntax of the clausal projections that will play a central role in our analysis needs to be complemented with their basic semantic composition.

PredP lacks a tense operator. Semantically, it is a 'core' proposition containing an unsaturated time variable on the verb. According to Stowell's (1995) theory of (morpho)syntactic and semantic tense, adopted here, the (morpho)syntactic tense morpheme is semantically vacuous: temporal interpretation is determined by a silent tense operator corresponding to the tense morpheme. I follow Stowell in assuming that T itself does not semantically alter the core proposition that PredP represents.[22] The anteriority associated with past tense is due to a null tense operator that introduces existential quantification over times, relating the time variable to speech time. The tense operator closes off TP, ultimately getting the time variable bound by an existential quantifier.[23]

The time argument is not necessarily bound by a tense operator merged to a local TP: under certain conditions, it may be bound by a tense operator merged to the TP of a superordinate clause. Through non-local binding from the higher clause, the time argument in the two clauses will be co-identified. The aspectual interpretation of the embedded clause remains independent of that of the superordinate clause, allowing for an aspectual expression of anteriority.

4.2 Negation and focus

Syntactically, the clausal negation particle is a phrasal category in Hungarian (see Surányi (2003) for arguments). The null hypothesis is adopted here, namely, that the clausal negation marker is base-generated in its surface position. Rather than positing a separate NegP functional projection, sentential negation is base-generated at the periphery of TP, the highest propositional projection of the clause (out of just two: AspP and TP). That sentential negation cannot be generated below TP may be inferred from the fact that in a negated past tense clause it outscopes the existential quantifier over times introduced by the tense operator (cf. Footnote 21). More specifically, sentential negation may fill a specifier position of the TP projection, where it is able to check T's "EPP" feature. As a result, XP_{VM} will remain in Spec,AspP, as illustrated in (17).

(17) a. $[_{TP}$ *nem* $[_{T}$ V] $[_{AspP}$ XP_{VM} $[_{Asp}$ ~~V~~] […]]]

b.

Nem	küldte	el	a cikket
not	sent-3sg	PRT	the paper-acc

'He didn't send the paper.'

That negation makes the movement of VM superfluous is evidenced by the fact that in the presence of negation, the VM stays in the lower clause in those syntactic contexts where the VM originating in an embedded clause normally 'climbs' to the left of the superordinate verb:

(18) a. Be$_i$ kell már [__$_i$ fejezni]
PRT must already finish-inf
'You must finish now.'

b. Nem kell még [be fejezni]
not must yet PRT finish-inf
'You don't have to finish yet.'

c. *Nem kell be$_i$ még [__$_i$ fejezni]
not must PRT yet finish-inf

Syntactically, a fronted identificational focus occupies an immediately pre-verbal position, similarly to clausal negation. Semantically, it also requires a full propositional sister, in other words, the notion of proposition relevant to the interpretive template for id-focus in (15) is a proposition that can be temporally anchored through the time argument it contains.[24] More precisely, if α is extracted out of β in (15a), then what is required for an id-focus interpretation is that β be a full propositional category prior to the extraction of α. The movement of α is legitimized by the id-focus interpretation it achieves. the an id-focus α should also be extracted from a TP and come to occupy a position at its edge, which I assume is a Spec,TP position, as in (19).[25]

(19) $[_{TP}\ FOC_{ident}\ [_{T}\ V]\ [_{AspP}\ XP_{VM}\ [_{Asp}\ \sout{V}]\ […]]]$

Once in Spec,TP, the fronted id-focus is able to satisfy the EPP property of T, just like negation, and makes the movement of the VM element unnecessary, in the same way as negation does in (17–18). Note, however, that this does not entail that the fronting of id-focus is *triggered* by T's EPP feature. The first-merge of negation takes place whether or not T has an EPP property. Nonetheless, once negation fills Spec,TP, it satisfies T's EPP feature there. The issue of the trigger of the movement of id-focus is taken up directly below.

4.3 Focus movement, Stress–Focus Correspondence and economy of computation

With this much in place, we now turn to consider the properties of the movement of an element α that gives rise to configuration (15a) in more detail. One issue is the overt vs. covert status of this movement, and another one is the landing site of α within the structure of the clause. I argue that the two are closely related, nevertheless. Specifically, I propose that these two properties of the movement of α are determined by the interplay of distinct economy considerations. First, as argued by Chomsky (1995, 2000, 2001), overt movement is more costly than covert movement. Second, applying 'main stress shift' in prosody is more costly than having the Nuclear Stress fall where it does by default (e.g., Reinhart 1995, 2006, Neeleman and Reinhart 1998).[26] These two manifestations of computational economy are spelled out in (20) and (21) below for ease of reference.

(20) Overt movement is computationally more costly than covert movement.

(21) Main stress shift incurs extra computational cost.

In a default prosody of the Hungarian sentence, the most prominent Phonological Phrase (PhonP) is aligned with the left of the Intonational Phrase (IntP) it is contained in (see e.g., Vogel and Kenesei 1987, É. Kiss 2002, who formulate this generalization in different terms).[27] Regarding the syntax/prosody mapping in the Hungarian clause, I will be assuming, essentially following Szendrői (2003), that the syntactic constituent TP proper is mapped to an IntP at the level of prosodic structure, and that adjuncts of TP are invisible for purposes of locating the NS in the IntP of a clause in the sense that they form PhonPs of their own without being integrated into an IntP.[28] Rather than postulating recursive DistP projections with fronted i-QPs in their specifiers (cf. Section 3.2 above), I treat fronted i-QPs as being adjoined, adopting the mainstream syntactic analysis of Quantifier Raising. The (outermost) specifier in TP (or in lack of one, the verb in T) will therefore correspond to the leftmost PhonP in the IntP that TP gets mapped to, therefore it will receive the NS of the clause.

Selkirk (1984), Truckenbrodt (1995: 11, 1999, Focus Prominence), Reinhart (1995: 62, Stress-Focus Correspondence Principle), Zubizarreta (1998: 21, Focus Prominence Rule), Schwarzschild (1999: 170), among many others, maintain that a focus constituent must contain the prosodically most prominent element of the clause that it appears in. In stress languages, this is the nuclear stress (NS).

(22) *Focus–Stress Correspondence*

A focus constituent contains the prosodically most prominent syllable of the clause.

The mapping rule in (22) (or some relevant equivalent) filters out cases where the focus status of some element does not correspond to an NS that it contains at the level of prosodic structure.

The Stress–Focus Correspondence condition requires an NS to fall inside the id-focus phrase, as it is a focus. Consider now a structure in which α is moved to a position described in (15a). Unless the occurrence of α is overt in this position (i.e., the movement of α is overt), and unless this position coincides with the left edge of the IntP it is contained in, main stress shift to the PhonP of α will be necessitated. If the costly operation of stress shift is to be avoided, the movement of α will need to be overt, and it will have to target the left edge of TP.[29] In other words, the avoidance of stress shift leads to overt movement of α to Spec,TP. From this it can be inferred that although if everything else is equal, covert movement is favored, the cost incurred by stress shift is greater than that incurred by opting for overt movement rather than for covert movement. If the spellout patterns of overt and covert movement chains differ essentially at PF, rather than in narrow syntax, then in the case at issue the cost of the PF process of stress shift is avoided by selecting the overt realization of the movement chain involved.[30]

Recall from section 4.1 that both TP and AspP are propositional categories, moreover, T itself does not contribute to the meaning of AspP when composing with it. Then the movement of α to an outer Spec,AspP position (below the verb in T) satisfies (15a). Such a movement then results in an id-focus interpretation as sketched in (15b), hence it is licensed by interface economy. Such a movement would require main stress shift in order to obey the Stress–Focus Correspondence condition: whether this movement to AspP is covert or overt, the focus phrase involved in the movement will not be the leftmost PhonP in the IntP that TP is mapped to. For this reason, the derivation is blocked, since there is an alternative derivation targeting the same semantic interpretation that does not require stress shift, namely the one that involves movement of the focus phrase into Spec,TP. This latter movement into Spec,TP must be overt for the same reason as before, viz. if it remained covert, main stress shift to the in situ overt copy of the focus phrase would be required.

A repercussion of this result is that focus movement into Spec,TP takes place independently of the EPP property of T, which it nonetheless satisfies once it occupies T's specifier position. Because focus movement to Spec,TP satisfies the EPP property of T, the

movement of XP_{VM} to Spec,TP is not required, and hence is blocked by computational economy (Last Resort):

(23) *[$_{TP}$ FOC_{ident} [$_{T'}$ XP_{VM} [$_{T}$ V] [$_{AspP}$ ~~XP_{VM}~~ [$_{Asp}$ ~~V~~] […]]]
*A CIKKET el küldte János
the paper-acc PRT sent-3sg John-nom
'It's the PAPER that John sent.'

Consider what prediction is being made for the co-occurrence of sentential negation and focus before the verb in T. Given that negation is base-generated in Spec,TP, its appearance should not be affected by any focus movement to TP. Focus movement, as we have seen, is determined by the Stress–Focus Correspondence (22) (taken together with the fact that main stress shift incurs extra cost (21), and is therefore avoided if possible) to target a landing site at the left edge of TP and to be realized as an overt chain. As a consequence, focus movement to TP is expected to be unaffected by the presence of a base-generated negation in Spec,TP. Indeed, focus and negation can co-occur to the left of the inverted verb:

(24) [$_{TP}$ FOC_{ident} [$_{T'}$ NEG [$_{T}$ V] [$_{AspP}$ XP_{VM} [$_{Asp}$ ~~V~~] […]]]
A CIKKET nem emailezte el
the paper-acc not emailed-3sg PRT
'It's the paper that he did not email.'

The same pattern is not available to XP_{VM}, which is raised to Spec,TP merely to satisfy T's EPP property. If this property is satisfied by a base-generated negation in Spec,TP, XP_{VM} cannot be fronted.

I assume, following Chomsky's (2000, 2001) proposal, that external Merge is less costly than movement, and that the economy measure applying internally to narrow syntactic computation is local (i.a. Collins 1997, Chomsky 2000 et seq.). A property of such a model is that it forces external Merge to a given projection to take precedence over movement to the same projection. This is the case, for instance, for *v*P: the external argument is Merged into Spec,*v*P before the object is raised to *v*P for reasons of Case, or before a *wh*-phrase is extracted successive cyclically to another Spec,*v*P position. Given the monotonic growth of the syntactic representation (i.e., the Extension Condition), the external argument phrase will come to occupy an inner specifier position. Mutatis mutandis, the same holds in (24) above. If

Merge indeed takes precedence over Move, then a fronted focus and clausal negation should not be able to occupy multiple specifiers of TP in the opposite order (NEG > FOC). The opposite linear order is also attested, however. If negation in such an order cannot be a specifier of T, the only other possibility left is to analyze it as an adjunct to TP, much like constituent negation, applied to the clause.

(25) $[_{TP}$ NEG $[_{TP}$ FOC_{ident} $[_{T}$ V] $[_{AspP}$ XP_{VM} $[_{Asp}$ ~~V~~] […]]]

Nem *A CIKKET* *emailezte* *el*

not the paper-acc emailed-3sg PRT

'It's not the paper that he emailed.'

That negation preceding a fronted focus can be an adjunct of TP is confirmed by the fact that an analogous configuration is possible in a construction where it is the XP_{VM} that has been raised to Spec,TP:[31]

(26) Nem el emailezte a cikket (hanem meg írta a jelentést)

not PRT emailed-3sg the paper-acc but PRT wrote-3sg the report-acc

'He did not email the paper, but wrote up the report instead.'

This adjunct use of negation does not simply express a negated proposition; its use is contrastive. The proposition that the negated proposition is contrasted with may remain implicit if recoverable from the context, and it may also be explicit (see the bracketed *but*-clause in (26)). The same applies to (25), which has the implicature (on a narrow focus reading) that he emailed something else, and its most natural continuation is a *but*-clause.[32]

If negation is an adjunct to TP in such cases as (26) and (25), it is not mapped to inside the IntP whose leftmost PhonP receives the NS, since it is the TP proper without its adjuncts (which include fronted i-QPs, as suggested above) that corresponds to the relevant IntP. Indeed, negation in both (25) and (26) can be pre-nuclear, instead of bearing the NS. In (26) this is the only prosodic option, while in (25), negation may bear a stronger accent than that of the fronted focus. The same holds of fronted pre-focus i-QPs as well: they may be pre-nuclear, and in that position they may also bear a more prominent accent than that of the pre-verbal focus. We return to these cases in Section 5.4 below.

4.4 Focus without focus movement

On the conception being explored, the surface position of the fronted focus is determined by the interplay of two main factors. One of them, the Stress–Focus Correspondence condition, applies to focus in general. The other one is the interface configuration (15) that yields an identificational focus interpretation. The notion that a condition requiring focus to be aligned with the default main stress position is at play in focus-related word order permutation has been developed in a variety of ways by a number of authors, including Reinhart (1995, 2006), Neeleman and Reinhart (1998), Zubizzareta (1998), among others, and with particular reference to Hungarian, by Szendrői (2003). In difference to their ideas, however, on the present account the syntactic movement of α and the quest to bring the focus into the default NS position, thereby avoiding the uneconomical operation of stress shift, are not linked directly. Notably, the syntactic movement of focus on this conception does not take place in order to align the focus with the default NS position. Rather, an expression α undergoes movement to achieve the identificational predicate interpretation in (15b). This, in turn, needs α to be a focus. Again in turn, that requires NS to fall within α. If a derivation exists that meets these requirements without applying main stress shift in the prosodic component, then that derivation will be selected.

One consequence of the indirect nature of the link between the movement of α and the quest to avoid the costly operation of stress shift concerns the syntax of non-identificational, ordinary focus. As discussed in detail by É. Kiss (1998a), in contrast to identificational (free) focus, ordinary (free) focus does not undergo syntactic movement in Hungarian. Consider why that should be so, given the present assumptions.

The configuration in (15a) is irrelevant to achieving ordinary focus interpretation, by assumption. The Stress–Focus Correspondence rule (22) applies to focus generally nevertheless, including both id-focus and ordinary focus. Here too the two options to satisfy (22) are to apply movement to the default NS position, Spec,TP, or to shift main stress without movement. Apparently, Hungarian opts for the latter, as does English. It can be inferred that the cost of applying a syntactic movement operation is higher than that of stress shift, which is why ordinary focus remains in situ, and NS is shifted to it. But in a case where the movement operation is independently licensed (as is the case for id-focus, owing to (15)), realizing this movement as an overt displacement is more economical, if it targets the default NS position, than resorting to stress shift.

It follows that ordinary focus does not undergo any movement, whether overt or covert. If a focus remains post-verbal in a sentence whose Spec,TP position is not occupied by an id-

focus, but by an XP_{VM} element (the neutral word order pattern), then that post-verbal focus can only be ordinary focus, but not id-focus.

This result is close to É. Kiss's (1998a) proposal, who suggests that information focus generally does not undergo movement, while id-focus does. In difference to É. Kiss (1998a), however, I believe that the type of post-verbal focus in neutral word order, rather than being information focus, is in reality ordindary focus based on alternatives. As (27) demonstrates, such post-verbal foci are not necessarily informationally (discourse-)new; instead, alternatives are invoked.

(27) A: Mari tegnap beszélt Jánossal, Péterrel és Ivánnal. Te tudod, kiket hívott meg?
'Mary talked to John, Peter and Ivan yesterday. Do you know who she invited?'
B: Meg hívta JÁNOST és IVÁNT, de nem hívta meg PÉTERT
PRT invited-3sg J-acc and I-acc but not invited-3sg PRT P-acc
'She invited JOHN and IVAN, but didn't invite PETER.'

The relation between ordinary focus and id-focus is one of proper inclusion: id-focus is an alternatives-based focus that functions as an identificational predicate.[33]

5. The flexible nature of focus movement

In what follows, this basic account of what can be referred to the prototypical instance of ex situ identificational focus in Hungarian (overt movement of id-focus to a pre-verbal position) is extended to several further cases. A consequence of the account proposed above is that the syntax of focus movement is flexible, as long as the interface condition of Focus–Stress Correspondence and economy of computation are observed.

One small aspect of this flexibility was already highlighted in the preceding section, where it was argued that in non-negated clauses focus fronting targets the (sole) specifier of TP, where it satisfies T's EPP property, whereas in negated clauses it targets an outer specifier of TP above negation, where it does not function as a category eliminating T's EPP feature.

Below we explore three further aspects of the syntactic flexibility of focus movement. The empirical areas concerned are: clauses with multiple foci (Section 5.1), predicate focus (Section 5.2), and focus in infinitival clauses (Section 5.3). In Section 5.4 we address the question whether focus movement can raise a focus phrase outside of TP.

5.1 Multiple foci

5.1.1 Complex focus with multiple focus exponents

One consequence of the fact that the licensing of the syntactic movement itself of a focus in an identificational focus construction is divorced from the overt vs covert status of the focus movement chain created is that the movement of α may also be covert. In a clause with a single focus, as demonstrated in Section 4.3 above, this option is ruled out. In constructions with more than one focus, however, it is realized.

As will be recalled from Section 1.2, in clauses containing multiple foci, postverbal foci undergo covert movement. It was argued on an empirical basis in Section 1.2 that in a clause with a complex semantic focus (in the sense of Krifka 1991) that is realized by multiple focus exponents (i.e., by multiple syntactic focus phrases), a postverbal focus phrase undergoes covert movement to the position of the fronted focus phrase. For concreteness, consider a clause with just two focus phrases, a pre-verbal focus (call it FOC_1) and a second, post-verbal id-focus (call it FOC_2). Given that there is only a single default NS, which falls on the leftmost PhonP of the IntP corresponding to TP, stress strengthening of FOC_2 is inevitable. This is because the two focus phrases correspond to two independent PhonP-s, only one of which can bear the default NS. The (correct) prediction therefore is that only one focus will raise overtly, receiving the default NS in Spec,TP, while the other focus undergoes only covert movement, which is the more economical choice compared to overt movement (cf. (20) above).[34]

5.1.2 True multiple foci

In a true multiple foci construction with two focus phrases, two actual id-foci are present in the clause, call them FOC_1 and FOC_2. Assume that semantically, FOC_2 (and its domain) falls inside the domain (or scope) of FOC_1 (for the notion of focus domain, see Büring 2008). Consider the predictions our model makes for such a case. As with a complex id-focus with multiple focus exponents, only one of the two FOC phrases will be licensed to be moved to Spec,TP overtly. Due to (15), the other focus phrase will have to undergo movement at least to a position outside AspP, by assumption the smallest full propositional category of the clause. As before, this movement will have to remain covert, since it does not bring the focus into a default NS position.[35] To derive the $FOC_1 > FOC_2$ interpretation under consideration, FOC_2 will necessarily be moved to a position that is lower than that of the pre-verbal focus FOC_1. As a result, the raised occurrence of FOC_2 will necessarily end up in a position that is

internal to the IntP corresponding to TP, hence not in the position where default NS is assigned. If FOC_2 is to be interpreted as id-focus, some extra prosodic operation that assigns it an NS is unavoidable. Cinque (1993), Reinhart and Neeleman (1998), and Reinhart (2006) assume main stress shift to be a complex operation that involves the reduction of the default NS and the strengthening of the stress of some other element. In the case at hand, however, the default NS should not be reduced, as it is required if FOC_1 is to be interpreted as id-focus. Stress strengthening will therefore apply to FOC_2 without stress reduction of the pre-verbal NS. Stress strengthening is a costly operation even when performed without concurrent stress reduction elsewhere. Stress strengthening nevertheless is unavoidable, whether FOC_2 is moved overtly or covertly. As a consequence, the more economical option is selected of the latter two, that is, the movement of FOC_2 will remain covert (cf. (20)). The predicted pattern is therefore (28):

(28) $[_{TP}\ FOC_1\ \ldots[(FOC_2)\ldots[\ldots(FOC_1)\ldots FOC_2\ldots]]]$ $(FOC_1 > FOC_2)$

That is a correct result: recall that a second focus in true multiple foci constructions was argued in Section 2.2 above to involve covert movement.

A difference between the prosodic prominence of the second, in situ focus in the true multiple foci (TMF) construction, and the in situ focus in the complex multiple focus (CMF) construction is that while the prosodic shape of the latter is the same as that of the pre-verbal focus, the stess on the former is somewhat eradicated (for this latter effect, see Fery and Ishihara, to appear). In light of the prosodic pattern exhibited by CMF, “most prominent” in the Focus–Stress Correspondence rule of (22) must quantify over degrees of stress, rather than the prosodic units themselves: there is no unique most prominent element in the CMF construction, but there is a unique largest degree of prominence, which in this sentence type characterizes more than one element. On the present account, the prosodic shape of TMF can be explained on the basis of the fact that in TMF sentences the chain of the in situ focus falls entirely within the domain of the fronted focus. The prosodic pattern associated with an id-focus involves strong accentuation of id-focus itself, followed by post-focal stress eradication in the domain of id-focus. Stress eradiction can optionally extend to include all the PhonPs in the IntP of the focus, or it can stop at the left edge of any PhonP following it. The strong accent on the post-verbal FOC_2 following FOC_1 will therefore optionally undergo stress eradiction. This eradicated accentuation of a focus is characteristic of second occurrence focus, understood here as a focus that is part of the presupposition associated with the given

sentence. Indeed, as FOC_2 is part of the domain of FOC_1, it is mapped to the existential presupposition induced by FOC_2. In other words, in a sentence with TMF like (40), FOC_2 must be presupposed, i.e., it must be a second occurrence focus. In the CMF construction, by constrast, neither of the two focus phrases forms part of the domain of the other, hence neither undergoes stress eradication.

As (29) illustrates (see also Section 2.2, (6), (7)), a focus surfacing in the post-verbal domain cannot covertly scope above the pre-verbal focus. The unavailable interpretation (29c) for sentence (41a) is represented by the structure and spell out pattern in (30). In (30), FOC_2 undergoes overt movement to a Spec,TP position, which is followed by the covert movement of FOC_1 to an outer Spec,TP above FOC_2.

(29) a. JÁNOS ette meg A LEVEST
J-nom ate-3sg PRT the soup-acc
b. 'It is John who is such that it is the soup that he ate.'
c. *'It is the soup that is such that it is John that ate it.'

(30) $*[_{TP}\ (FOC_1)\ [_{T'}\ FOC_2\ [_{T}\ V]\ [\ldots FOC_1 \ldots (FOC_2) \ldots]]]$ $(FOC_1 > FOC_2)$

Nothing we have said so far rules out (30). This may be taken to be a welcome consequence, however, just in case there is some factor beyond those that the model developed here has drawn on that blocks (30) independently. If that is the case, then the preclusion of (30) by the model as conceived of in the foregoing would be redundant.

Arguably, (30) is ruled out on account of the fact that (28) derives the same interpretation in a more transparent way.[36] It is often suggested that grammar is characterized by an economy condition which favors isomorphism between LF (roughly speaking, scope) and PF (linear order) representations. In particular, I follow Bobaljik and Wurmbrand (2008) in assuming that an economy condition demands that PF linear precedence relations should reflect asymmetric LF relations (of 'scope') deriving from hierarchical semantic structure. Bobaljik and Wurmbrand dub this economy condition Scope Transparency, and formulate it in the general terms of (31):

(31) *Scope Transparency*
If the order of two elements at LF is A»B, the order at PF is A»B.

(31) is violable if the grammar of a particular language does not have the necessary 'tools' to be able to obey it in a particular case. The scope relations targeted by (30), however, are precisely those that are successfully expressed by (28). As (28), but not (30), satisfies Scope Transparency (31), (30) is blocked. Note both (28) and (30) apply one overt focus movement, therefore there is no difference between them with respect to the economy consideration in (20), favoring covert movements over overt ones.

A question left open regarding the structure in (28) concerns the precise landing site position of the covertly raised post-verbal id-focus. As both AspP and TP are fully propositional categories, in principle both may be targeted by this covert instance of focus movement. The fact that an i-QP may scopally intervene between the fronted FOC_1 and FOC_2 (cf. (6a) above) does not help decide the issue. This is because an i-QP may also (covertly) raise to adjoin to any propositional category, including AspP and TP. Therefore a FOC_1 > i-QP > FOC_2 relative scope interpretation might be generated by moving all three elements to TP, or by moving FOC_2 (and possibly i-QP too) only as high as AspP. That focus movement can indeed target not only TP, but also AspP is evidenced by the following example.

(32) a. Who is it that could possibly have read TWO papers?

b. JÁNOS olvashatott el KÉT CIKKET
J.-nom read-mod-past-3sg PRT two paper-acc
'It's John who could possibly have read TWO PAPERS.'($^{OK}FOC_1$ > MOD > FOC_2)

The interpretation indicated is available in (32) only if FOC_2 is raised to a position below the modal operator associated with the modal suffix of the verb. Whether that operator is assumed to take scope in the position of the verb, or in some lower position between TP and AspP (e.g., in a ModP generated between the two), FOC_2 is interpreted below that position. In other words, FOC_2 in (32) cannot be analyzed as covertly raised to a Spec,TP, but has to be located in a lower 'LF' position. If AspP is the smallest category that is interpreted as a full proposition, then FOC_2 must be raised to AspP in (32). This latter detail is immaterial from the perspective of the main conclusion we can draw from examples like (32), viz. that focus movement does not specifically target (Spec)TP, but can also target a lower position.

5.2 Focus movement in infinitival clauses

In finite clauses, where V raises to T and id-focus fronts to Spec,TP, β of (22) corresponds to the minimal TP (=V+AspP). As demonstrated below, an infinitival clause allows the same

option, alongside another structural variant in which id-focus fronts to (an outer specifier of) AspP, rather than to TP.

In an infinitival clause (and in the so-called *–vA* adverbial participial clauses), verb inversion to T is optional in the presence of negation and in the presence of fronted id-focus (see Brody 1995). This is illustrated in (33) for fronted id-focus:

(33) a. Jó volna IDŐBEN emailezni el
good Cop.cond time-in email-inf PRT
b. Jó volna IDŐBEN el emailezni
good Cop.cond time-in PRT email-inf
'It would be good to email it over IN TIME.'

This alternation is analyzed by Brody (op. cit.), who assumes a clause structure with a FocP projection above TP, as being due to the optionality of V-raising to T. The raising of T to Foc remains obligatory, but in the absence of V-to-T, T-to-Foc, which is responsible for verb inversion, applies vacuously.

On the present account the alternation in (33) does not need to be put down to optionality in movement (and a concurrent optionally 'strong' property of T in these clause types). Instead, it can be accounted for by differences in the Numerations on which the two derivations are based, i.e., in the respective sets of constitutive elements of the two clausal patterns. As the Numerations are different, (33a) and (33b) do not belong to the same reference set of derivations. (Alternatively, the two derivations are not in the same reference set because they are not identical in their semantic composition.) Specifically, I propose that whereas T is present in (33a), it is absent from (33b). If T is present, V-movement to T is obligatory, yielding the verb-inversion pattern. If T is absent, no V-raising is possible. In this latter case no TP is erected on top of AspP (and also no CP projection is present). [37] When no T(P) is part of the infinitival clause, negation and id-focus will only be able to attach to AspP as an outer specifier. Recall that AspP is a propositional category, containing a verb that bears a time argument. (This time argument will be bound only at the level of a higher clause where a TP housing a tense operator is projected.) Attaching negation and/or id-focus to AspP does not alter the basic VM > V order. When TP is projected, id-focus (or negation) fills Spec,TP, and the verb raises to T, i.e., verb inversion to the left of the VM element is obligatory.

This result is made possible by the particular view of the connection between verb movement and id-focus fronting (or negation insertion) assumed in the present account,

namely, that there is no direct relation between the two. That view makes available a treatment of non-inverted VM > V orders in infinitival clauses containing a fronted id-focus which is based on the flexibility of the size of the clausal unit to which id-focus attaches.

5.3 Identificational focus without dedicated movement

An important respect in which the interface configuration (15a) is neutral is that it involves no requirement that the movement of α must have been "triggered" in order for it to function as identificational focus. As a consequence, (15a) also matches structures in which α has undergone movement independently of its focus status. This option can be argued below to be realized in cases where the id-focus is the VM element, and cases where the id-focus is the verb (without the VM element).

On such interpretations the neutral VM V order remains unchanged (in the case of verb focus, the preceding VM element is not omissible):

(34) a. FEL szaladtam egy kollégához, nem LE
up(PRT) ran-1sg a colleague-to not down(PRT)

b. Fel SZALADTAM egy kollégához, nem *(fel) SÉTÁLTAM
up(PRT) ran-1sg a colleague-to not up(PRT) walked-1sg

c. *ÉNEKELTEM el a verset, nem SZAVALTAM
sang-1sg PRT the poem-acc not recited-1sg

It requires the addition of stipulations to rule out the inverted order (34c) in V-focus on a FocP-based account, while its ungrammaticality falls out on the present approach. This is because in sentences like (34b) V has raised to T independently of focus structure. In this position it finds itself in the identificational focus configuration sketched in (15a), hence, if the NS falls on it, then it will be interpreted as id-focus. The NS of the clause will be able to fall on V only by way of stress shift, as V is located in an IntP-internal position, preceded by a VM that is raised independently to Spec,TP to satisfy T's EPP property. As stress shift is unavoidable to achieve the targeted interpretation, it does not result in ungrammaticality, in accordance with the notion of interface economy. It can be concluded that the verb in V-focus constructions is interpreted as id-focus even though it does not undergo focus-movement: it occupies its normal IntP-internal position, viz. T.

In (34a), where it is the VM that functions as an id-focus, the structure instantiates (15a) with α=VM. As VM is at the left edge of TP=IntP, no dedicated focus movement is required in order for the VM element to receive default NS.

Focus movement, then, is flexible not only with regard to the position it targets, but also with respect to whether it needs to take place or not.

5.4 Focus movement out of TP?

Before concluding this section, let us examine the possibility of focus movement outside of the TP projection where the focus element originates. First, consider (35b) as a response to the question in (35a).

(35) a. Úgy tudom, János csak EGY PÁR FILMET nézett meg
'I thought John watched only a couple of movies.'

b. Nem. János [$_{TP}$ MINDEN FILMET [$_{TP}$ meg nézett ...]]
no J.-nom every film-acc PRT watched-3sg
'No, John watched EVERY FILM.'

Here the NS is found on a fronted i-QP adjoined to TP, and it functions as the focus of the answer. In Section 5.1 above it was argued that overt focus movement targets the left edge of the IntP that corresponds to the TP category that excludes any adjuncts to TP. In (35b) above, however, an element functioning both semantically and prosodically as the focus of the clause is overtly raised outside of TP proper to an adjunct position.

It can be shown that this incongruity is merely apparent. The i-QP in (35b) is not interpreted as an id-focus. That it cannot be interpreted as an identificational predicate may be inferred from its inability to appear in the immediately pre-verbal Spec,TP position followed by an inverted V > VM word order. One could entertain the possibility that perhaps it cannot function as an identificational predicate only when occupying the Spec,TP position. That this is not so is evidenced by the fact that i-QP in a pre-TP position cannot function as a contrastive id-focus in constructions where it is preceded by an adjunct negation (id-foci may generally be used as contrastive, cf. É. Kiss 1998a), see (36a). The movement to the pre-verbal field of an i-QP bearing the NS is optionally overt or covert, similarly to non-NS-bearing i-QPs (see Section 2.2): (35a) can also be felicitously answered by (36b), on the same interpretation as that assigned to (35b).

(36) a. *Nem MINDEN FILMET meg nézett,
not every film-acc PRT watched-3sg
hanem csak EGY PÁR FILMET nézett meg
but only a couple film-acc watched-3sg PRT
intended: ‘He didn’t watch EVERY FILM, he only watched a couple of films.’

b. Nem. János [$_{TP}$ meg nézett MINDEN FILMET ...]
no J.-nom PRT watched-3sg every film-acc

We can conclude that the i-QP bearing the NS in (35b) and in (36b) is ordinary focus, rather than id-focus, and its syntactic movement is due to what is responsible for these properties of i-QPs generally: QR. As both (35b) and (36b) involve main stress shift (given that the NS is not located on the VM element in Spec,TP, but on i-QP), neither is more costly in that regard (cf. (21)). This determines neither the overt nor the covert spell out pattern of QR to be less economical.

However, this cannot be the whole story. Scope Transparency (31) would favor overt QR. Covert movement, at the same time, is less costly than overt movement, hence is preferable. One could entertain an account on which the optionality of the overt versus covert status of the QR movement is precisely due to these two antagonistic economy principles: if one is satisfied, the other will be inevitably violated. Unfortunately, this line of argument would falsely predict that the movement of id-focus to the pre-verbal position should also be optionally overt or covert, as the same economy principles would have the same violation profiles in each of the two cases. It can be conjectured that the movement of id-focus and that of i-QPs must differ in some regard that we have not considered yet.

I suggest that the relevant difference lies in a prosodic requirement that characterizes id-focus, but not i-QPs:

(37) An id-focus and its background (domain) must belong to the same intonational phrase.

This requirement may very well be related to the phenomenon of post-focal stress eradication, i.e., the reduction of stresses following the id-focus until the end of the intonational phrase. (37) allows for scenarios where id-focus and its background together form an IntP with no IntP boundary between them, and it only permits a prosodic structure where there is an IntP boundary between the id-focus and (the whole or part of) the background, if that IntP boundary falls *within* the IntP that both the id-focus and its background are part of (i.e., a

recursively embedded IntP structure).[38] I suggest that (37) gives rise to the difference between id-focus movement and i-QP raising to the pre-verbal field in an indirect way.

I base my account on a sharpened version of the Focus–Stress Correspondence condition in (22) above, and two further assumptions pertaining to the syntax–prosody mapping (part of the syntax–PHON interface). First, this mapping has a preference for simpler prosodic structures over more complex ones. As a particular principle, I adopt (38). Second, following the Transfer-based approach to the syntax–prosody mapping in Kratzer and Selkirk (2007), I assume that an adjunct phrase in a clause is mapped by default to its own IntP. Finally, I adopt a sharpened, and I believe, more accurate formulation of the Focus–Stress Correspondence condition suggested by Reinhart (1995) and others (see Reinhart 1995: 62), which relativizes the prosodic prominence requirement to IntPs; see (40).

(38) Minimize the number of IntPs.

(39) Adjunct phrases are mapped by default to an independent IntP.

(40) *Focus–Stress Correspondence*

A focus constituent contains the prosodically most prominent syllable of the intonational phrase it is contained in.

In this work I have adopted the standard view of QR that it creates an adjunction structure, i.e., QR-ed i-QPs are adjuncts, in the case at hand, to TP. As a result, when QR is overt, the i-QP forms an IntP of its own. When QR to an adjunct position above the pre-verbal VM is covert, i-QP will spelled out in situ, where it will fall inside the IntP corresponding to TP. These two options are given schematically below:

(41) a. $(_{\text{IntP}}$ QP $)$ $(_{\text{IntP}}$ VM V . . . $)$

b. $(_{\text{IntP}}$ VM V . . . QP . . .$)$

If QP functions as a focus, then, as is by now familiar, stress strengthening (probably even stress shift, if Focus–Stress Correspondence is to be properly adhered to) needs to apply in (41b). Stress strengthening does not need to take place in (41a), however, unlike we assumed immediately above. This is because the QP, which, by assumption is a focus in the cases at issue, forms an IntP of its own, therefore it will necessarily contain the most prominent stress in its own IntP (though not necessarily the NS of the utterance, which by default falls in Hungarian on the prosodic head of the rightmost IntP of the Utterance Phrase). At the same

time the interface economy principle in (38) favors (41b), as it involves only one IntP, given that in (41b) QP does not form an IntP of its own. Therefore we have the prosodically dispreferred stress strengthening (stress shift) and the syntactically preferred covert movement, along with a violation of the Scope Transparency principle in (41b), against an extra IntP, disfavored by (38), and overt movement, a costly syntactic operation, and adherence to Scope Transparency in (41a). We can then understand the optionality between overt and covert realizations of QR in terms of these two very different violation profiles, as a lack of an overall preference of the grammar of either form over the other.

The relevance of (37) above should now be clear. The requirement in (37) does not allow FOC in (42a) and FOC1 in (42b) to form an IntP of their own. (42a–b) would be mapped from a syntactic structure where FOC and FOC1 are adjoined to TP – a structure that (37) excludes.

(42) a. *($_{IntP}$ FOC) ($_{IntP}$ VM V . . .)
b. *($_{IntP}$ FOC1) ($_{IntP}$ FOC2 V . . .)

Ultimately, then, i-QPs are fronted optionally overtly or covertly because they form an IntP of their own by default (*qua* adjuncts), while id-focus must move to the pre-verbal position in overt syntax because of the prosodic condition that it belong to the same IntP as its background (or domain), where post-focal stress eradication applies.

As expected based on this account, an i-QP functioning as focus may overtly front to the left of a fronted id-focus too (43). In this case we have multiple foci. The prosodic structure corresponding to (43) is analogous to that in (41a) with id-focus replacing VM. If i-QP is a focus, then given the structure of (43), it has id-focus in its domain. Even though i-QP has its own main stress within its own IntP, this stress is perceived as stronger than that of id-focus. This may be the result of post-focal stress eradication following i-QP functioning as a focus, or to the more general requirement that stress eradication facilitates, namely that a focus needs to be the prosodically most prominent element in its domain (see Truckenbrodt 1995, 1999).

(43) [$_{TP}$ MINDEN FILMET [$_{TP}$ JÁNOS nézett [$_{AspP}$ meg ...]]
every film-acc J.-nom watched-3sg PRT
'JOHN watched EVERY FILM.'

To conclude the discussion, it appears that the model can be successfully extended to cover cases like (35b), (36b) and (43). Note that according to the analysis presented here, apparent focus-movement from inside TP to outside TP proper of i-QPs does not involve *bona fide* focus movement; rather, it is an overt form of QR. It is its overtness that is derived from the (ordinary) focus property of the i-QPs entering these constructions. We briefly turn to an analogous scenario involving clausal negation, before we turn to non-focus i-QPs.

In the light of the preceding discussion, the fact that a fronted id-focus can be preceded by a clausal negation bearing a major stress falls into place. Clausal negation located in the same adjoined position that i-QP occupies in (43) can receive its own prominence in the same way as i-QP does (compare (25) in Section 4.3 above), i.e., by forming its own IntP. As clausal negation gets to a TP-adjoined position independently of what goes on inside TP proper, the same analysis and predictions apply to it as to (43), correctly, it appears.[39]

(44) [$_{TP}$ NEM [$_{TP}$ JÁNOS nézett [$_{AspP}$ meg egy pár filmet ...]]]
not J.-nom watched-3sg PRT a couple film-acc
'It's not John who watched a couple of films.'

Finally, a note on the impossibility of raising id-focus phrases outside of TP. As should be clear, any elements in the clause that are to the left of the default NS position at the left edge of TP proper may bear NS only by stress strengthening, or by a recursive IntP structure where This also explains why an id-focus cannot be extracted from TP proper to some position in the clause preceding the leftmost PhonP of TP proper, say, to an adjunct position of TP, as in (45):

(45) *[$_{TP}$ JÁNOS [$_{TP}$ minden moziban [$_{TP}$ meg nézett [$_{AspP}$ ... egy filmet...]]]]
J.-nom every cinema-in PRT watched-3sg one film-acc
intended: 'It's John who watched a film in every cinema.'

This hypothetical derivation involves stress shift 'across' an IntP boundary to the focus phrase that appears outside the IntP corresponding to TP proper. Granting for the sake of the argument that such stress shift is permitted, an alternative derivation where the movement of the focus targets Spec,TP, raising i-QP to some scope position below Spec,TP (see (46) below), does not incur stress shift, and therefore blocks (45).[40]

(46) [$_{TP}$ JÁNOS nézett [$_{AspP}$ minden moziban [$_{AspP}$ meg [... egy filmet...]]]]
J.-nom watched-3sg every cinema-in PRT a film-acc

In short, the model predicts, correctly it seems, that *bona fide* focus movement to a position within the clause that is outside TP proper (=IntP) is excluded.

There is some evidence that fronted i-QPs may be realized prosodically as topics. This is not wholly unexpected, given that those i-QPs that are sufficiently rich descriptively or are D-linked, are acceptable even in a syntactic topic position (e.g., Surányi 2003):[41], [42]

(47) Minden diák, aki most itt ül tegnap egy buliban volt
every student-nom who-nom now here sits yesterday a party-in was
'Every student who's now sitting here was at a party yesterday.'

Furthermore, in a small-scale prosodic experiment carried out together with Shinichiro Ishihara (see Ishihara and Surányi 2009), we found that non-focus fronted i-QPs tend to bear either H*, H*L or L*H pitch accents. Topic phrases were found to bear all these accents (and also the rise-fall L%H*L).[43] It appears then that – even though simple i-QPs are not in a syntactic topic position – fronted i-QPs can bear topic pitch accents, and are likely to be interpreted as topics. The movement of topics is restricted to overt syntax in Hungarian. I will suggest in Chapter 5 below that this is due to the following prosodic requirement of topic interpretation (essentially, the inverse of the relevant requirement applying to id-foci):

(48) Topics must not belong to the same IntP as the comment.

Consider now i-QPs that are to be interpreted as topics. If such an i-QP undergoes QR but is spelled out in situ, then it can only obey (48) if IntP boundaries are inserted around it (or at least at its left edge, if it is in a final position). If, however, it is spelled out in the higher position of its QR chain, then, as an adjunct, it will be mapped to its own IntP by default, as we saw above. It follows then that if an i-QP is to function as a topic, its QR must be overt.

In our experiment we did not find any occurrences of a fronted i-QP that could not be categorized either as having a topic interpretation or having a focus interpretation. I therefore suggest that the overtness of the QR of i-QPs is due to indirectly to the prosodic requirements of either one of these two interpretations. In all other cases, i.e., when non interpreted either

as a focus or as a topic, QR in Hungarian remains covert, just as it is in familiar languages of the English type.

6. Summary and outlook

We began with chapter by reviewing the mainstream feature-checking- and hierarchical syntactic template based approach to focus movement in languages like Hungarian, pointing out its weaknesses. An alternative was developed that – in accordance with a central objective of the dissertation – restricts the role of syntactic templates (STs) to what is necessary independently of the grammar of focus, arguing that both the (apparently) syntactic restrictions and the partial word order flexibility that are witnessed can be reduced to properties of the mapping at the interfaces to SEM and to PHON, respectively, without postulating either a special absolute syntactic position for focus in the clausal ST or checking of an uninterpretable [foc(us)]-feature. It was also contemplated how the account could extend to the apparently optional fronting of (non-topic) increasing distributive quantifier phrases. I proposed tentatively that this is due to the adjunct status of QR-ed quantifier phrase, which are therefore mapped to a separate IntP, taken together with the economy preference of the syntax–prosody mapping to minimize the number of IntPs.

The approach to focus movement presented in these pages is based on the conception that (i) 'identificational focus movement' takes place to bring a focus into an appropriate interface configuration that gives rise to an identificational predication interpretation, and (ii) the landing sites targeted by focus movement and the surface (PHON) realization of focus movement are determined in a complex interaction of the identificational predication template with general principles of grammar, including a Stress–Focus Correspondence requirement. The empirical objective of the paper was to offer a sufficiently elaborate 'flexible' alternative to the current mainstream 'cartographic' analyses of the syntax and interpretation of identificational focus in Hungarian. Instead of relying on functional projections dedicated to focus (FocP) and on uninterpretatble focus features to trigger focus movement, the alternative proposed combines an identificational predication semantics for identificational focus with a general focus–stress alignment requirement, and with aspects of computational economy. Computational economy manifests itself at different levels of the grammar, determining for any given targeted interpretation the least costly way that Nuclear Stress can be assigned to its focus element(s).

The main points of the paper are summarized in (41) below:

(41) a. Identificational focus is interpreted as an identificational predicate due to the identificational focus interface template (15), which applies in English-type specificational predication and Hungarian focus movement constructions alike.

b. The identificational focus template (15) can license the narrow syntactic movement of focus (which is covert by default, cf. (42b)) for the purposes of Last Resort. If a focus undergoes movement without entering the configuration of (15), that movement is not licensed (or else it is licensed independently of its focus status). In other words, ordinary (non-identificational) focus does not undergo movement (qua focus).

c. The identificational focus template (15) interacts with general conditions including those enumerated in (42), as well as with independent language-particular properties of Hungarian, including those in (43).

d. As a result, some id-foci overtly front to TP, some others move covertly to a lower position within TP. An id-focus is raised to AspP below TP in those infinitival clauses that lack a TP projection. Some foci do not need to undergo movement qua foci at all in order to be interpreted as id-foci. No focus movement of an id-focus may extract a focus from the TP it originates within to a TP-external position within the same clause.

e. No uninterpretable focus feature is employed by narrow syntax.

f. No dedicated functional projection exists for id-focus.

(42) a. Stress–Focus Correspondence condition

b. Several manifestations of economy of computation (e.g., covert movement is less costly than overt movement)

c. Scope Transparency

(43) a. Overt verb movement to T

b. Nuclear Stress Rule aligns the NS with the leftmost PhonP in IntP

I have been able to present little more than a bare bone sketch of a model, leaving a variety of questions unaddressed. My main aim, however, was to explore how a theory in terms of an interpretive template for identificational focus is able to give a principled account of relatively intricate facts in the syntax of Hungarian focus, many of which are difficult to explain within the frame of a ‘cartographic’ feature-checking approach.

The model outlined in this paper clearly raises various important questions that I did not touch upon and cannot hope to adequately address at the present stage of inquiry. One obvious issue that I would like to offer some general comments on in closing concerns the nature and extent of linguistic variation that such an approach may allow for.

Clearly, the powerful analytic tools of variation in the placement of dedicated functional projections in a clausal hierarchy as well as in the parameters of associated features are unavailable in this model. I believe this is a potential advantage, rather than a shortcoming, to the extent that the account of relevant variation derived from such parameterization appears to offer little hope of a genuine explanation. That, of course, is fine, if and to the extent that we cannot do better. The family of approaches to which the present one belongs is in principle able to offer a potentially more explanatory account of variation regarding the syntax of focus than that available in a 'cartographic' approach in so far as it can relate properties of focusing to a number of properties of a given language that are independent of specific constraints on focus.

For one thing, languages plainly vary with regard to the placement of default NS. In a language where default NS is placed on the right, id-focus movement would either be directed rightwards, or if that is not available (either for some language specific reason, or in human syntax in general a la Kayne), then it would have to remain covert. Languages might vary regarding the degree of cost they assign any of the interface operations involved in the present account of id-focusing, a variation perhaps to be captured in an Optimality Theoretic framework (cf. Samek-Lodovici 2005). Some languages may tolerate main stress shift more easily and in a broader range than others. If the operation of syntactic movement is the most costly of the operations that come into play, then it should follow on an interface economy approach that only id-focus can ever be moved without any independent trigger. This is so because while an id-focus interpretation is generally unavailable without movement, an ordinary focus status is in principle available by stress shift alone. Nevertheless, a focus can undergo overt movement (albeit not qua focus) when an independent movement operation (e.g., scrambling) applies to it, or it may appear in a non-canonical surface position if other elements are (also) moved around, a possibility exploited in the Neeleman/Reinhart/Zubizzareta/etc. approach. Languages of course also vary in terms of their basic clause structure, and movements taking place within that structure, with which the id-focus interface template (15) and the Stress–Focus Correspondence condition (22) are expected to interact in complex ways. Exploring such options for variation must be left for future research.

Notes

[1] Compare Chomsky's (2000) suggestion of a [Q] feature on wh-phrases and on C, in addition to the [wh] feature on wh-phrases.

[2] See Gundel (1999) for a different characterization of distinct focus types in the literature.

[3] For a five-grade grouping of focus-sensitivity effects from mere contextual (in)felicitousness through differences in presupposition to truth-conditional consequences, see Hajicova, Partee and Sgall (1998).

[4] Other familiar examples of focus determining different truth-conditions include the following ((ii) and (iii) are cases of what is called free or unbound focus, cf. Jacobs 1984):

(ii) a. DOGS must be carried
b. Dogs must be CARRIED [Halliday 1967]

(iii) a. Clyde gave me the TICKETS by mistake
b. Clyde gave ME the tickets by mistake [Dretske 1972]

(iv) a. The largest demonstrations took place in PRAGUE in November (in) 1989
b. The largest demonstrations took place in Prague in NOVEMBER (in) 1989 [Partee 1991]

[5] May (ibid.) assumes that multiple wh-movements to the left periphery are necessary for a pair list reading to be brought about in multiple questions, as only left peripheral adjacent wh-phrases can serve as input to Absorption, i.e. quantification over pairs. Barss (2000) confirms this assumption on the basis of the distribution of pair list and single pair readings in English multiple questions, and Surányi (2006) extends it to a number of other languages, including Hungarian.

[6] Independently of the scope of post-verbal foci, post-verbal iQPs can take wider than surface scope freely (see Chapter 2). Scope readings deriving from this freedom of wide scope available to iQP are disregarded in (2).

[7] The category of verbal modifier (VM) is a distributional class of elements, including verbal particles and (other) secondary predicates, among others.

[8] É. Kiss (2002) (also in her prior work), in order to account the 'pre-verbal scope' of post-verbal iQPs, invokes an optional stylistic (PF) reordering rule that postposes pre-verbal iQPs at PF to the post-verbal domain (a view adopted in Szabolcsi 1997). See Surányi (2002), where I raise issues for such an analysis. É. Kiss (to appear) suggests that iQPs with pre-verbal scope but surfacing in the post-verbal field are right-adjoined.

[9] A weaker position is possible in principle that is compatible with the conception of a fixed ordering of the relevant functional projections: one may allow the multiple iteration of the whole of the fixed series of projections (RefP*>DistP*>CountP/FocP) within a clause, assuming that the functional phrases in any such series are filled (or projected) only optionally. This is (roughly) the approach that Brody and Szabolcsi (2003) adopt. For critical comments on their account, see É. Kiss (to appear).

[10] In some languages, the opposite pattern obtains: the semantic focus of the clause remains in situ, and some other element(s) get(s) displaced, ensuring that the semantic focus sits in a prosodically

prominent position. Such an analysis is given by Neeleman and Reinhart (1998) of Dutch, and by Zubizarreta (1998) of Spanish.

[11] The fact that (at least some) foci invoke alternatives is stipulated as an additional condition (possibly as part of the interpretation of focus operators). Identificational focus involves further specific conditions, viz. those of exhaustivity / maximality, which also need to be superimposed on the basic structured meanings account of focus.

[12] Szabolcsi (1994), developing Kenesei's (1986) implementation of id-focus semantics, proposes that an id-focus like JOHN is interpreted as a predicate of predicates in (i). Here the effect obtaining in (8c) of the iota and ident type shifters of (8a) is incorporated in the semantics of the id-focus expression itself, which also contains an additional maximality condition.

(i) $\lambda P[\, j = \iota x[P(x) \,\&\, \forall y[P(y) \rightarrow y \subseteq x]] \,]$

[13] Bende-Farkas notes that the existence presupposition is "constructed from material to the right of focus." This should be qualified: the presupposition includes semantic material that is contained in the sister constituent of the fronted focus, interpreted as the background. That includes variables left behind by movement and reconstructed elements. It excludes material that is linearly to the right of focus, but originates structurally higher (e.g., sentence adverbials).

[14] The same interpretive effects obtain in it-clefts as well, which arguably also reduce to a (specificational) pseudocleft structure, modulo extraposition of the that-clause (e.g., Percus 1997). Depending on the analysis, the existential presupposition projected by the subject expression may be ascribed to its semantic definiteness/maximality, or it may also be ascribed to its topic function.

[15] É. Kiss (2006, 2007) follows Huber (2000) in taking specificational predication to involve the specification of the referential content of a set, which she assumes to be the interpretation of both English specificational pseudoclefts and the Hungarian id-focus construction. She assumes that a set that is being referentially specified cannot be empty, which derives the existential presupposition the construction gives rise to. Specification of referential content is taken to be exhaustive, which is why Hungarian id-focus receives an exhaustive interpretation.

[16] As Heycock (1994) notes, a sentence like (14b) is only acceptable if it is not interpreted as specificational predication.

[17] The post-copular specificational element is not only a focus, but, as it appears from the unacceptability of the English equivalent of examples like (13b), it must be the main focus of the clause.

[18] I restrict the discussion to individual type foci, but the account can be generalized in principle to any type: the variable x is not necessarily type e. It should be noted, though, that α can apply to β in (15b) only if x, y and z are all of one and the same semantic type. Importantly, if α is a (generalized) quantifier phrase GQP extracted from inside β, then this requirement is not met, as the 'trace' variable

bound by GQPs is of type e, while GQPs themselves are of a higher type. This is the key to the explanation of the fact that GQPs cannot be fronted to the focus position in the HFC.

[19] The identificational meaning of α′ of (15b) may be due in the SCC to the copula itself, rather than to an ident type shifter. The conversion of (15a) into (15b) should then be conceptualized as involving two in principle independent type shifts in two steps: first ident type shift applies to α, and then iota type shift applies to β in order to resolve the type conflict arising in attempting to compose two predicates of the same type. For the conception that iota type shift takes place in the SCC to resolve this latter kind of type mismatch, see Partee (1998/2000). If this is on the right track, then only the ident type shift is the core of (15). As this difference does not directly affect the analysis of the HFC, I will not explore it here.

[20] The outcome of this particular account resonates with Schlenker's (2003) analysis, according to which the SCC is interpreted as an identification of two propositions.

[21] This movement may be taken to be "stylistic" in the sense of Holmberg (2000), serving purely to satisfy EPP of T. It is suggested in Surányi (2009) that what undergoes movement is not the VM element itself but a vP-internal remnant PredP projection housing the VM in its specifier, which has been previously vacated by any elements in the complement of Pred. In clauses without a VM element, the remant PredP category still moves to Spec,AspP and to Spec,TP, satisfying T's EPP property. For the sake of simplicity, the notation XP_{VM} is used in (16) and infra.

[22] Kusumoto's (2005) implementation of Stowell's (1995) proposal could also be adopted, ascribing the meaning in (i) to T (adapting Kusumoto's suggested denotation slightly). T in (i) saturates the time argument of the verb with a variable. The view that tense morphemes are time variables that saturate a time argument slot has been advocated i.a. by Partee (1973), Enc (1987), and Abusch (1994, 1997). Then, TP (without the tense operator) will receive the interpretation in (ii) (where, to keep the representation simple, the core proposition is P(j,m,t), and j and m are individual constants, and t is the time argument).

(i) $[[T]] = \lambda p.\lambda t'.p(t')$

(ii) $\lambda p.\lambda t'.p(t')\ [P(j,m,t)] = \lambda t'.P(j,m,t)(t') = P(j,m,t')$

[23] To illustrate, a simplified denotation of a PAST operator is provided in (i). The time variable within proposition p is replaced by t', which gets quantified over by the existential quantifier introduced by the PAST operator: there is a t' preceding the speech time t (to be composed with the result of applying (i) to a core proposition) such that the proposition holds at t'.

(i) $[[PAST]]^g = \lambda p\ [\lambda t \in D_i [\ \exists t'.t' \in D_i [t' < t\ \ \&\ \lambda t' p(t') = 1]]]$

[24] It is well-known that specificational predication is disallowed in English Small Clauses, see (i–ii). This may be explained on the present assumptions by the fact that the SC lacks a verb bearing a time variable, which is why a SC like (ii) is not a full proposition: even if the focus element Sam covertly

raises to a position immediately outside the SC, the SC will not be an open proposition that includes a time argument.

(i) I consider…/ I want … / With …, the town will soon go bankrupt

(ii) *[$_{SC}$ the mayor Sam]

[25] In an important paper, Horvath (1995) argued for assigning fronted focus to a Spec,IP position in Hungarian. Her reasons for making that proposal largely had to do with the apparent parallelisms between Case-feature assignment and focus-feature assignment in the grammar, rather than the complementary distribution of negation and the VM on the one hand, and the VM and id-focus on the other. Independently, Kenesei (1992) also analyzed fronted focus in Hungarian as a specifier of IP. Aissen (1992) argued the same for three Mayan languages (Tzotzil, Jakaltek and Tz'utujil). Compare also Miyagawa (2009).

[26] Either some or all 'main stress shift' phenomena may be construed in terms of applying default stress rules to a prosodic structure that is derived by modifications of (prosodic grouping of) the default prosodic structure. On such an approach, the computational cost can be assumed to be incurred by modification of default prosodic structure, rather than by some operation of stress shift proper.

[27] I adopt the mainstream view that stress is calculated at the level of prosodic structure, an autonomous level of representation derived from syntactic structure (see, e.g., Selkirk 1995 and references cited there).

[28] That view implies a rejection of the Strict Layer Hypothesis (Selkirk 1984). Alternatively, it could be assumed that adjuncts to TP form recursively nested IntPs (see Ladd 1986, cf. also Wagner 2005) as in (i); see Footnote 42 supra. The most prominent PhonP of the most embedded IntP (=XP) in (i) will receive the NS of the clause. The same XP would be assigned the NS on an approach to prosodic structure with unlabeled prosodic categories such as Selkirk (1984) or Wagner (2005), on account of the fact that the intonational units labeled iP's in (i) below are recursively nested in each other.

(i) [iP adjunct1 [iP adjunct2 [iP XP V …]]]

[29] Szendrői (2003) assumes that the syntactic transformation of HFM itself is triggered by the Focus–Stress Correspondence condition. I am proposing that HFM is licensed by Last Resort due to the interpretive template (15), and the Focus–Stress Correspondence condition interacts with economy of computation and other factors in determining whether a given HFM transformation is spelled out as an overt or as a covert movement.

[30] A number of conceivable ways in which this can be made precise are compatible with the present assumptions. For concreteness, it can be assumed that covert movement (taken here to be category movement) moves a category without the associated phonological matrix, while overt movement moves the whole set of features that make up a given element. Given that the same narrow syntactic operation is involved in the two cases, they fare equally with respect to economy of syntactic computation. Overt movement is more costly than covert movement because it incurs extra

computation at PF, due to the fact that the pre-movement occurrence of the moved element needs to be silenced. As the only difference between overt and covert movement is limited to PF-features, this view finds a natural place within a model of movement where the overtness/covertness of a movement 'chain' is due to PF requirements in a broad sense. The EPP feature of Chomsky's (2000 et seq.) model could then be conceptualized as a PF-selectional feature.

[31] A negation in (inner) Spec,TP and a negation adjoined to TP can co-occur:

(i) Nem nem emailezte el
not not emailed-3sg PRT
'He didn't not email it.'

(ii) Nem A CIKKET nem emailezte el
not the paper-acc not emailed-3sg PRT
'It's not the paper that he did not email.'

[32] (26) might also be analyzed as involving pars pro toto focus movement of the VM element (for the notion, see Fanselow 2004; for a discussion of pars pro toto focus movements in Hungarian, see Kenesei 1998). On that treatment, (26) is assimilated to (25).

[33] As (27) illustrates, not only id-focus, but also ordinary (post-verbal) focus can be contrastive. I do not discuss bound foci here, i.e., foci associated with overt focus-sensitive particles such as even or also. These additive particles in Hungarian must attach directly to their associates, and their distribution is essentially parallel to that of i-QPs. To the extent that additive focus-sensitive particles operate on propositions, it is not unexpected that they too are extracted from, and attach to, propositional categories. Quantifier phrases are of type <<et>t>. Building the existential presupposition into the semantics of is 'also' would yield the following <<et>t> meaning for a phrase János is 'John also.'

(i) [[John also]] = $\lambda P \exists x : x \neq j \ \& \ P(x)=1 \ . \ P(j) =1$

[34] Adapting Krifka's (1991) treatment to the present account of identificational focusing, the interpretation of a single complex semantic id-focus involves the composition of the two focus exponents into a single identificational predicate. From the result reviewed in Section 3.2 above that for such a complex focus interpretation to be available a second focus must move to the position of the fronted focus, it can be concluded that the formation of a complex semantic id-focus requires some form of structural adjacency, similarly to what has been suggested independently for multiple wh-phrases in multiple wh-questions asking for a list of n-tuples (e.g., pairs) as an answer (see Dayal 2002 and references therein).

[35] As pointed out in Section 2, the order of major constituents in the post-verbal domain of the clause is free (É. Kiss 1987, 2002). Movements available in the post-verbal field independently of the

movement of focus in order to match the interpretive template in (15) are of course available to a post-verbal focus too, as well as to other elements in the post-verbal domain. For an argument that the movement of a second id-focus not only can, but also must, be covert, see Footnote 13 supra.

[36] Thanks to an anonymous reviewer of the paper on which much of the present chapter is based for raising this possibility.

[37] Participial verbal morphology is not due to T in infinitivals, where the verbal stem is affixed by an infinitival marker –ni (depending on general assumptions regading the place of morphology in the grammar, either it is generated in morphology, or as a participial head). The infinitival –ni form of the verb may also simply be the default form of the verb: this form is found in V(P)-doubling contexts in V(P)-fronting:

(i) Szeretni [szerettem Marit]
love-inf love-past-1sg M-acc

[38] Recursion in prosodic phrasing, weakening or questioning the Strict Layer Hypothesis, is advocated by Ladd (1986, 1996), and more recently in Wagner (2005), Ito and Mester (2007), Kratzer and Selkirk (2007), among others. For illuminating discussion of prosodic recursion in the broader context of cognition, see Hunyadi (2006). A recursive IntP structure (and IntP containing another IntP) may be involved in (at least some) true multiple foci constructions.

[39] Given that clausal negation functions as focus here, it must be a member of a set of alternatives, that can be readily constructed from negation and affirmation operators. Because clausal negation consists of a sole syllable, if stress eradication after negation stops at the left edge of id-foc (i.e., if it does not take place), then two Nuclear Stresses end up on adjacent syllables, which is rhythmically marked. If the NS within id-focus does not fall on the first syllable of the id-focus phrase, this problem disappears. N.B. As an alternative prosodic realization of the string in (38), negation can be joined to the IntP corresponding to the lower segment of TP in syntax as pre-nuclear material.

[40] A distinct possibility, which cannot be pursued here for reasons of space, is that (51) is (also) excluded on the grounds that in the position where the fronted focus is located it should be interpreted as a(n aboutness) topic due to a topic interface template. If the interface configuration in which the fronted focus element in a finite TP external position in (51) takes part fits the topic template better than the id-focus template, then that can block the id-focus template from applying to the fronted element in (51).

[41] Topics can appear to the left of the sentence adverb ‘yesterday,’ while i-QPs ordinarily are degraded in such a position.

[42] Note that all i-QPs have a non-null witness set. On Szabolcsi’s (1997) account, i-QPs contribute their witness set, which functions as a logical subject of predication mediated by a Dist operator.

[43] In the expermient we recorded a total of 12 speakers (in three different sessions), of which 4 speakers were annotated and statistically analyzed. We employed sentences with multiple i-QPs

preceding the VM position in a straight VM–V order (QP1 QP2 VM V), controlling for different locations of the focus (QP1, QP, VM and broad focus) by manipulating the context.

Chapter 4
Scrambling in Hungarian: A radically free word order alternation?

1 Introduction

Previous chapters of the dissertation have investigated syntactic alternations, including positional alternations in covert syntax, which consistently have a direct effect on semantic interpretation in terms of scope-taking or in terms of identificational predication by an identificational focus expression (Chapters 2 and 3, respectively), or at least the choices among them may have an interpretive impact (Chapter 3). In this chapter we look at word order alternations in the Hungarian post-verbal field that apparently have no consistent semantic effects that would apply across the board. Any semantic effects that are found are those that arise as a by-product of being located in the hierarchical positions that a given element subject to the alternation occupies in relation to other elements. In other words, the word order alternation under scrutiny is shown to be radically free, using a term of Chapter 1. The lack of a systematic semantic effect precludes a SEM-interface based treatment of this apparently free alternation.

Hungarian is well-known for its overt movements to a richly articulated preverbal left-periphery ('discourse-configurationality'), where syntactic hierarchy and scope interpretation are isomorphic (e.g., É. Kiss 1987a, 1991, 1995, Kenesei 1986). By contrast, its postverbal domain, where constituent order exhibits a radical freedom, has received much less attention. The most prevalent, and indeed empirically most well-argued and elaborated analysis of the phenomenon that has emerged is that of É. Kiss's (1987b, b; 1991, 1994a, 2002, 2003), according to which the nuclear part of the clause in Hungarian is non-configurational, where elements are base-generated in Hungarian in a flat structure (cf. also Kenesei 1984).[1] The flat structure of this nuclear clausal constituent is held responsible for the radical freedom of word order of the immediate constituents, as well as other phenomena involving a lack of some of the subject–object asymmetries exhibited by fully configurational languages. Importantly, there appear to be significant cross-linguistic differences regarding the

presence/absence of these asymmetries as well as with respect to the degree of the flexibility of word order within the particular nuclear syntactic constituent of clauses that is structurally analogous to the constituent that is claimed to have a flat structure in Hungarian. In view of this, É. Kiss's (ibid.) approach to the Hungarian facts implies that there may exist fundamental structural differences between languages, such that some large section of the clause is non-configurational in some languages, but configurational in others.

Adopting the desirable null assumption of the Uniformity of Grammars (see Chapter 1, Section 3.3), I develop an alternative analysis that avoids the postulation of such an elementary difference between languages. In particular, the objective of the present chapter is to propose and motivate a movement-based scrambling approach to the free word order alternation at issue, which extends to predict the curiously selective absence of subject–object asymmetries that Hungarian exhibits. I challenge the non-configurationality thesis by demonstrating systematically that the arguments put forward to back it up are inconclusive, and in fact it fails descriptively as well. The alternative proposed here is based on a hierarchical verb phrase (vacated by the raised verb) and a Japanese-type local scrambling movement that operates in the post-verbal domain of the clause. The scrambling movement analysis, besides being theoretically more desirable than the (partial) nonconfigurationality based approach, makes available a superior descriptive coverage in accounting for a varied set of structural symmetries and asymmetries holding between subject and object.

Before embarking on the enterprise, a caveat is in order. The goal of the scrambling proposal in this chapter is to explain the facts indicated immediately above. Identifying the trigger of the scrambling movement proposed here is a task that we take up in the following chapter, suggesting an analogy with certain syntactic uses of relatively high adverbials.

The structure of the chapter is as follows. In Section 2 I enumerate the empirical arguments that have been presented in favor of a flat structure, which involve a lack of subject–object (S/O) asymmetries.[2] In Section 3 I demonstrate that the arguments reviewed in Section 2 in favor of a flat structure are inconclusive: some of the arguments are ill-founded, and some others lose force once a scrambling movement analysis based on a hierarchical structure is shown to derive the observed patterns equally well. Section 4 presents a host of asymmetry facts that are problematic under a non-configurational analysis, but fall out on a scrambling approach modulo the hierarchical *v*P that this account adopts. Section 5 examines the basic properties of the postverbal object–subject reordering in Hungarian, and demonstrates that this reordering is akin in particular to (local) scrambling of the Japanese-type. In Section 6, taking a typological perspective, we check whether Hungarian shares the

properties of well-studied non-configurational languages, and whether Hungarian is characterized by the features that are commonly seen as correlates of the scrambling property. Section 7 concludes the chapter, and spells out the significance of its results and their relevance to the main themes of the dissertation.

2 The partial non-configurationality account

The partial non-configurationality account, elaborated by É. Kiss's (1987a, b; 1991, 1994a, 2002, 2003) contends that the nuclear constituent of the Hungarian clause (S in (1987a, b) and later, VP) is non-configurational (cf. also Kenesei 1984); in particular, arguments (and adjuncts) are generated in a free order in a flat structure, as schematized in (1) (É. Kiss 1994a, 2002, 2003).[3]

(1) a. $[_{VP}\ [_{V'}\ V\ DP_{subj}\ DP_{obj}]]$
b. $[_{VP}\ [_{V'}\ V\ DP_{obj}\ DP_{subj}]]$

The flat VP analysis is not without appeal due to its descriptive merits, which is probably the reason why it has become the most widely accepted view in the literature on Hungarian.[4] It is designed to capture two central properties of the syntax of the Hungarian clause: first, constituent order to the right of the verb exhibits a degree of freedom unattested in 'fixed word order' languages like English; and second, Hungarian is assumed to lack most subject/object asymmetries characteristic of languages where the subject is base-generated in a position higher than the object. This is not to say that Hungarian lacks subject/object asymmetries altogether. Within a flat VP approach, observable asymmetries of that kind must be treated as non-structural in nature, as we will see shortly. In this section I review the major arguments cited to back up the non-configurational view of the Hungarian verbal phrase (É. Kiss 1987a, b; 1994a, 2002, 2003).

2.1 Weak Crossover

(i) Weak Crossover (WCO) effects typically obtain when an element X is A-bar moved across an expression Y, where Y contains a variable bound by X. In languages like English, where the A-position of the subject is higher than the A-position of the object (the former c-commands the latter), *wh*-movement of the object across the subject gives rise to a marked

degradation in acceptability, as in (2a) below, while no such deterioration is observable in the reverse configuration, as in (2b). Reinhart (1983) proposes to capture WCO in terms of the configuration licensing bound variable pronouns: bound variables must be A-bound (bound from an A-position) by their antecedent. Koopman and Spotiche's (1982) alternative view based on their Bijection Principle essentially dictates that pronouns must not be locally A-bar bound. According to Lasnik and Stowell's (1991) formulation, if a pronoun *pron* and a trace *t* left behind by an A-bar movement are both bound by a quantifier (like the displaced *wh*-expression), then *t* must c-command *pron*. It follows on any one of these generalizations that the A-position of the object does not c-command the A-position of the subject (and the pronoun inside it), while the A-position of the subject does c-command the A-position of the object (and hence also the pronoun inside it).

(2) a. ?*[Who$_i$ does [[his$_i$ mother] like t_i]]?
b. [Who$_i$ [t_i likes [his$_i$ mother]]]?

Hungarian, by contrast, is a language that does not display a WCO effect in analogous constructions (see (3a)), which has received an explanation under the flat VP analysis as follows. If the VP is flat, the position (marked by t_i) from which the object is *wh*-moved across the subject is sister to the position of the subject. No WCO effect obtains, because the object is moved from a position where it c-commands the (co-indexed pronominal variable inside the) subject. The WCO effect is absent also when the subject undergoes *wh*-movement, as is the case in English. On the flat VP analysis, this is expected as the A-position of the object (and hence the pronoun inside it) is c-commanded by the A-position of the subject.

(3) a. [Kit]$_{ACC\ i}$ hívott fel [az *pro*$_i$ anyja]$_{NOM}$ t_i ?
who-acc$_i$ called-3sg up the (his$_i$) mother-poss.3sg-nom
'?*Who$_i$ did his$_i$ mother call up?'
b. [Ki]$_{NOM\ i}$ hívta fel t_i [az *pro*$_i$ anyját]$_{ACC}$?
who-nom$_i$ called-3sg up the (his$_i$) mother-poss.3sg-acc
'Who$_i$ called up his$_i$ mother?'

WCO effects are not wholly absent from Hungarian: they are attested in long *wh*-movement, as illustrated by the contrasted sentences below.[5] In the (a) example, long *wh*-movement proceeds across the dative DP in the matrix clause, which embeds a silent pronoun

co-referring with the moved *wh*-element. In (b), in contrast, the deictic second person covert pronoun *pro* does not interfere.

(4) a. *Kivel$_i$ mondtad az *pro*$_i$ anyjának, hogy
who-with say-past-2sg.def the (his) mother-poss.3sg-dat that
kikezdtek a fiúk t_i?
flirted-3pl the boys-nom
'*Who$_i$ did you tell his$_i$ mother that the boys had flirted with?'

b. ?Kivel$_i$ mondtad az *pro* anyádnak, hogy
who-with say-past-2sg.def the (your) mother-poss.2sg-dat that
kikezdtek a fiúk t_i?
flirted-3pl the boys-nom

This observation is important to make, as it shows that Hungarian has no internal property which would preempt WCO effects in general; nevertheless, WCO is unattested in short *wh*-movement of objects.[6]

2.2 Superiority

(ii) Superiority effects in single *wh*-fronting languages like English are exemplified by (5). In this language type it is the higher *wh*-item that must be attracted to the left periphery, i.e., to CP. The effect of Superiority in a multiple fronting language is illustrated from Bulgarian in (6): the original c-command relations between the *wh*-elements must be preserved after multiple *wh*-fronting (see Bošković 2002, Richards 1997).

(5) a. Who saw what?
b. *What did who see?

(6) a. Koj kogo vižda?
who who-acc sees
'Who sees whom?'
b. *Kogo koj vižda?

Hungarian shows no sensitivity to Superiority in multiple *wh*-fronting:

(7) a. Ki mit vett?
who what-acc bought
'Who bought what?'
b. Mit ki vett?
what-acc who-nom bought

If neither argument is generated higher than the other, the lack of a Superiority effect in multiple *wh*-fronting of arguments of the same verb is expected.

2.3 Idioms and compositional theta-role assignment

(iii) A particularly interesting variety of evidence offered in favor of the flat VP analysis comes from idiom chunks. É. Kiss points out that as opposed to configurational languages of the English type, besides V+O idioms, Hungarian also has idioms composed of V+S, exemplified below.

(8) a. Jánosra rájár a rúd
J-onto PV-goes the stick-nom
'John is having trouble.'
b. Jánost eszi a fene
J-acc eats the plague-nom
'John is extremely worried/envious.'

In other words, there is no subject/object asymmetry in the domain of idiom chunks either, as predicted by a non-hierarchical VP structure.

Similar in vein is the argument from indirect theta role assignment. English has numerous examples where the theta role of the subject is determined not simply by the verb, but by the choice of verb and object together, as in (9). Now given that English is taken to be characterized by a lack the opposite scenario, where the choice of the subject would determine the semantic role of the object, this has been taken to constitute evidence that the subject is external to a constituent containing the verb and the object (VP, prior to the VP-Internal Subject Hypothesis (VISH), V' or big VP after the VISH became generally accepted) (cf. Marantz 1984).

(9) a. John broke a vase
b. John broke an arm

É.Kiss (1987a), citing Komlósy (1982), points out examples from Hungarian, where it is the choice of the subject that determines the semantic role of the object:

(10) a. Eszi Jánost az oroszlán
eats J.-acc the lion-nom
'The lion is eating John.'
b. Eszi Jánost az irigység
eats J.-acc the envy-nom
'Envy is eating John.'

If Hungarian lacks the above subject/object asymmetry characterizing idiomaticity in configurational languages like English, then this provides support for a structural analysis wherein subject and object assume symmetric positions.

2.4 Movement of subjects

(iv) Subjects and objects in many constructions are extracted from their local clause with an equal ease in Hungarian. In English, the complementizer *that* blocks the extraction of the subject (aka the *that*-trace effect), whereas it has no effect on the extraction of the object (see (11)). Hungarian has no comparable *that*-trace effects (see (12)), hence subject-extraction behaves on a par with object-extraction in this regard. (Note that for many speakers the long-moved subject *wh*-expressions preferably appear in accusative case, licensed by the verb within the clause where they are moved to (see e.g., É. Kiss 1987a, (20)). No *that*-trace effect is attested in that variety either.)

(11) a. Which candidate did you say (*that) became president?
b. Which candidate did you say (that) the people elected?

(12) Melyik jelölt mondtad, hogy elnök lett?
which candidate-nom say-past-2sg that president become-past-3sg
'Which candidate did you say became president?'

Hungarian has no ban on *wh*-extraction across a local [Spec,CP] filled by another *wh*-phrase either. While in English the extraction of a *wh*-phrase across the local [Spec,CP] filled by a *wh*-expression leads to ungrammaticality with subjects, but only to a milder degradation with objects (cf. (13)), no such difference can be detected in Hungarian, cf. (14) (É. Kiss 1987a).

(13) a. **Which boy do you wonder why wants to buy a new car?
b. ?Which car do you wonder why John wants to buy?

(14) a. (?)Melyik tanár nem tudod, hogy miért buktatott meg?
which teacher-nom not know-2sg that why failed-3sg PV
'**Which teacher do you wonder why flunked you?'
b. (?)Melyik diákot nem tudod, hogy miért buktatták meg?
which student-acc not know-2sg that why failed-3pl PV
'?Which student do you wonder why they flunked?'

These two discrepancies between subject and object in English-type languages are normally accounted for in terms of the position of the subject. While the object is generated as sister to the verb (in a complement position), the subject is not: it originates (and also surfaces) higher. What É. Kiss concludes from the lack of these subject/object differences in Hungarian, is that not only the object, but also the subject is born as sister to the verb in a flat VP in the language.

2.5 Condition C

(v) Condition C (which requires referential expressions like names not to be c-commanded by a co-referential DP) rules out (15b), while it rules in (15a), because in English the subject c-commands the object, but the object does not c-command the subject.

(15) a. Yesterday Peter_i's mother phoned him_i
b. *Yesterday he_i phoned Peter_i's mother

É. Kiss argues that in Hungarian Condition C effects obtain with R-expressions inside objects and subjects alike. (16) illustrates binding into the subject by the object.

(16) *Tegnap felhívta a fiúk$_i$ anyja$_{NOM}$ őket$_{ACC\ i}$
yesterday up-called-3sg the boys-nom mother-poss.3sg-nom them
'Yesterday the boys'$_i$ mother called them$_i$ up.' [judgment from É. Kiss 2002]

This judgment once again follows from a non-configurational verb phrase structure, where the subject DP c-commands (into) the object DP, and vice versa.[7]

2.6 Free postverbal consitutent order

(vi) The major descriptive appeal of the flat VP analysis is the ease with which it can treat the apparent radical freedom of postverbal word order. While we find a strict hierarchy to the left of the finite verb, in the postverbal area a radical freedom of constituent order is attested. This falls out in a flat VP analysis, on the assumption that the overt material to the right of the finite verb corresponds to what is dominated by the VP.

2.7 Anaphor and pronominal variable binding

(vii) S/O asymmetries are nevertheless manifested in anaphor and pronominal variable binding.

(17) a. *Gyakran elemzi(k) önmaguk/egymás a pszichológusokat
often analyze-3sg/3pl themselves-nom/each other-nom psychologists-acc
'*Themselves/each other often analyze psychologists.'

b. Gyakran elemzik a pszichológusok önmagukat/egymást
often analyze-3pl psychologists-nom themselves-acc/each other-acc
'Psychologists often analyze themselves/each other.'

These asymmetries are presumed not to be a reflection of a structural asymmetry, but instead, of an asymmetry in terms of prominence in a Thematic Hierarchy or in terms of linear precedence: É. Kiss (1991, 1994a) posits a Primacy Condition, which subsumes these two factors disjunctively in order to cover the complete set of anaphor and pronominal variable binding facts.[8]

All in all, the flat VP theory appears to be a descriptively successful and analytically simple account of the facts above taken together.

3 Reducing subject-object symmetries to scrambling

What I demonstrate next is that the arguments reviewed in the previous section are not compelling. The various forms of a lack of an S/O asymmetry **(i–vi)** enumerated in section 2 are inconclusive in supporting a non-configurational, flat VP approach. Arguments **(iii)**, **(iv)** and **(v)** are ill-founded, and **(i)**, **(ii)** and **(vi)** lose their force, given that a scrambling movement analysis based on a hierarchical *v*P can derive the observed patterns just as well.

3.1 Weak Crossover and Superiority

In particular, **(i)** and **(ii)** lose force because scrambling is known to obviate WCO violations. Scrambling languages typically lack WCO and Superiority violations in mono-clausal contexts (see (2) and (3), respectively) (e.g., Haider 1986, Saito 1992, Wiltschko 1998, Fanselow 2001, and especially Fanselow 2004). I illustrate this from German in (18) and (19), respectively.

(18) Wen liebt seine Mutter nicht?
who-acc loves his mother-nom not
'Who is such that his own mother does not love him?'

(19) a. Wen hat wer gesehen?
who-acc has who-nom seen
b. Was hat wer gesehen?
what-acc has who-nom seen
c. Ich weiss wen wer liebt.
I know who-acc who-nom loves

Scrambling languages are assumed to show no Superiority or WCO effects becasue scrambling itself obviates Superiority / WCO. (20) exemplifies WCO obviation in German, and the same is illustrated in (21) for Japanese:

(20) a. *. . .weil seine Mutter jeden Studenten liebt
since his mother-nom every student-acc loves
'His mother loves every student.'

b. . . . weil [jeden Studenten]$_i$ seine Mutter t_i liebt
since every student-acc his mother-nom loves
[Grewendorf and Sabel 1999: 16]

(21) a. ?*[[Soitui-no hahaoya]-ga [darei-o aisiteru]] no?
the guy-gen mother-nom who-acc love Q
b. ?Darei-o [[soitui-no hahaoya]-ga [t aisiteru]] no?
who-acc the-guy-gen mother-nom love Q
'Who does his mother love?'
[Saito 1992: 73]

The obviation effect follows on the assumption that an object can undergo A-bar movement starting from a position *above* the subject, a position that is available to it precisely due to scrambling. As Fanselow (2001) points out, *was-für* split can strand the *für*+XP component of the complex *wh*-phrase in a scrambling position, providing evidence that scrambling can feed *wh*-movement in German, see (22a). This approach receives further confirmation from the fact that an in situ object *wh*-phrase can overtly scramble above the subject *wh*-phrase, see (22b) (e.g., Müller 1993).[9]

(22) a. Was hätte denn [*t* für Aufsätze] selbst Hubert nicht rezensieren wollen
what had Prt [*t* for papers] even Hubert not review wanted
'What kind of paper would even Hubert not have wanted to review?'
(Fanselow 2001)
b. Wem hat was wer *t* gegeben? (Müller 1993)
who-dat has what-acc who-nom given
'Who gave what to whom?'

Although WCO S/O asymmetries are absent with short *wh*-movement and focusing, they obtain in some other cases (cf. Marácz 1989). I illustrate this in (23) with universal quantifiers. The contrast in (23) would be explained on a flat VP analysis by É. Kiss's (1991, 1994a) Primacy Condition on Binding involving thematic prominence and linear precedence disjunctively (see **(vii)** in section 2 above). But the contrast receives a straightforward explanation on a hierarchical *v*P account as well: Quantifier Raising (QR) of the universal QP (cf. Surányi 2003) produces a WCO configuration in (23a), but not in (23b).

(23) Nem ismerte fel . . .
not recognized-3sg PV . . .
a. *[aza férfi, aki bement *pro*$_{3SGi}$ hozzá] [mindegyik lányt]
that the man-**nom** who in-went-3sg to.her$_i$ every girl-**acc**$_i$
'*The man who dropped by her$_i$ didn't recognize every girl$_i$.'
b. [mindegyik lány]$_i$ [azt a férfit, aki bement *pro*$_{3SGi}$ hozzá]
every girl-**nom**$_i$ that-acc the man-**acc** who in-went-3sg to.her$_i$
'Every girl$_i$ didn't recognize the man who dropped by her$_i$.'

Universal QPs (and other increasing distributive QPs) can be fronted in Hungarian to their preverbal scope-taking position overtly (traditionally identified as an adjunction site; Szabolcsi 1997 argues that it is DistP, but see Surányi 2004a for a defense of the traditional view). If we apply this overt form of QR (call it QP-fronting) in (23a), we get (24), and somewhat surprisingly, the degradation of (23a) almost completely disappears.

(24) (?)[Mindegyik lányt]$_i$ felismerte t_i' [az a férfi, aki bement *pro*$_{3SGi}$ hozzá] t_i
every girl-**acc**$_i$ recognized-3sg that the man-**nom** who in-went-3sg to.her$_i$
'*?The man who dropped by her$_i$ recognized every girl$_i$.'

The Primacy Condition, which disjunctively involves precedence and thematic prominence as a condition on binding, is able to cover this fact: the quantifier precedes the bound pronominal in (24).[10] However, the same fact receives an explanation on the scrambling account too, and does so in the same way as in the case of (3a) above: in the derivation of (24), the object is first scrambled to a position above the subject (= t_i'), and is A-bar-moved to its preverbal position in a second step. What explains that this derivation is not available in (23a), is that scrambling is generally restricted to overt syntax.[11]

In short, on a scrambling account, thematic prominence can be replaced with c-command inside the *v*P, and instead of precedence, scrambling takes care of the availability of A-binding by the object into the subject precisely when the object comes to precede the subject. On this approach, the licensing condition of binding can simply be based on c-command, instead of the theoretically less desirable disjunctive principle of the Primacy Condition.

3.2 Idioms and compositional theta-role assignment

The appealing argument from idioms and compositional theta-role assignment **(iii)** is inconclusive for two reasons (for the sake of brevity, I concentrate here on idioms, but the arguments extend also to compositional theta-role assignment). First, the logic of the argument is flawed: on a flat VP analysis, which the evidence is supposed to support, [V+S] does not form a base structure constituent, and nor does [V+O]. This apparently flies in the face of the notion (going back to Marantz (1984)) that idioms are (roughly) base structure constituents. Second, idioms frequently cited to the instantiate the [V+S] idiom type are not in fact disallowed in a hierarchical VP structure on Marantz's (1984) assumptions either. For instance, [V+S] idioms involving a subject that is arguably an underlying internal argument of the verb, such as unaccusatives, are predicted to be allowed. *Piroskának leesett az álla* lit. 'Piroska-dat fell the jaw' and *Piroskának kinyílt a szeme* lit. 'Piroska-dat opened the eye' (cited in É. Kiss 2002) exemplify this type of idiom.[12] Psych verb constructions are another case in point. Chtareva (2005) argues that a group of [V+S] idioms in Russian that are apparently problematic for Marantz's (1984) hypothesis in reality fully conform to it, insofar as they represent idioms involving psychological causative predicates whose surface subjects are themes, and whose surface objects are experiencers (like the English verb *frighten*); see (8a). On a fairly standard approach (see Belletti and Rizzi 1988), in these constructions the experiencer is generated above the theme, hence the verb and the surface subject form a base structure constituent.[13] This type of example has often been used, albeit wrongly, to back up the flat VP analysis (see e.g., É. Kiss 1987a: 22–23); see (25b), as well as (8) above.

(25) a. Ivan-a zajela sovest'
Ivan-acc up.ate conscience-nom
'Ivan's conscience is troubling him.'

b. Jánost elkapta a gépszíj [É. Kiss 2003: 26]
J-acc PV-caught the driving.belt-nom
'John is intensively involved / caught up in something.'

Third, even English has idioms involving S and V, but not the complement of V: for instance, *God bless him*, *Fortune smiled on Gwendolyn* or *The devil alone knows X* (see Postal 2002 for more examples, and compare also Everaert 1993; the same goes for the influence on theta role assignment, e.g., *Somebody is eating popcorn* vs. *Something is eating him*). According to Everaert, subject idioms are much more frequent in clearly configurational languages than

often suggested in the literature, although object idioms are clearly the less marked case.[14] Of course, the same is true for Hungarian: [V+O] idioms are more abundant than [V+S] idioms. All in all, no firm conclusions can be drawn from the domain of idioms to back up a flat VP analysis.

3.3 Movement of subjects

Moving on to the observations in **(iv)**, it is easy to see that, even though they involve a difference between subject and object, they are quite independent of the issue of (non-)configurationality. As far as the lack of *that*-trace effects is concerned, this has been correlated with the property of *pro*-drop (Perlmutter 1971), and with the availability of *v*P-internal subjects (Bennis 1986, Szczegielniak 1999), properties that are applicable to Hungarian and that can be found in configurational languages as well.

Regarding the grammaticality of *wh*-extraction across a local [Spec,CP] filled by another *wh*-phrase, this is a feature that can be explained in terms of the left-peripheral configuration underlying Bulgarian-type multiple *wh*-fronting (see Rudin 1988), characteristic also of Hungarian. It has also been suggested that this behavior is a feature of languages where a *v*P-internal surface position is available to subjects, e.g., Italian, Spanish (see Sabel 2002 and references therein), which is once again a property that apparently holds of Hungarian. The availability of a *v*P-internal position for the subject once again does not directly concern the hierarchical asymmetry between the position of subject and that of the object.

3.4 Condition C

Let us now come to the alleged S/O symmetry with respect to Condition C violations, i.e. **(v)**. The first point I would like to make concerns the status of examples like (16). 10 out of the 25 informants whose judgments I have surveyed found examples analogous to (16) degraded, but not unacceptable (? or ??), and 7 speakers judged them to be OK, and only 8 informants rejected them as ?* or *. Second, the degradation found in (16) can partly be put down to the placement of the pronoun, which is in a final position, separated from the verb by the subject phrase. In Hungarian such a surface position is known to be generally disfavored by personal pronouns, which, if postverbal, prefer to be close to the verb (Varga 1981), not separated from it by a stress-bearing element. Indeed when the subject expression is fronted to a topic position and hence the accusative pronoun follows the verb immediately, the judgment profile improves significantly: OK=10, ?=9, ??=3, ?*=2, *=1. A more radical improvement is

attested when the antecedent of the pronoun is made salient by the context, and the (3SG) overt pronoun in examples analogous to (16) is replaced by a (3SG) object *pro*. In contrast, when the silent pronoun is a subject bound by the possessor in the object, the sentence is severely degraded.[15]

(26)	a.	?Péter$_i$ főnöke	hívta	fel	*pro*$_i$	reply to: Who called up Peter?
		Peter's$_i$ boss-nom	called	up	him$_i$	
	b.	*Péter$_i$ főnökét	hívta	fel	*pro*$_i$	reply to: Who did Peter call up?
		Peter's$_i$ boss-acc	called	up	he$_i$	

It is important to note that although examples with an object pronoun co-referring with a lexical possessor inside the subject are of varied acceptability across speakers, speakers tend to find sentences with a subject pronoun co-referring with a lexical possessor inside the object much worse. Although judgments of co-reference (involving nominative and accusative pronouns—but see Note 10) are not so sharp as to serve as the basis of a strong argument either pro or con, they lean in the expected direction only if the subject is indeed generated above the object.[16]

Interestingly, É. Kiss has suggested that with *wh*-possessors (instead of lexical possessors) we get no S/O asymmetry, unlike in English (judgments from É. Kiss 1987b), compare (27) and (28). On the flat VP approach, (27) can be seen as involving Strong Crossover, i.e., a Principle C violation.

(27)	a.	*Kinek$_i$ az anyja	hívta	fel	őt$_i$?	
		whose$_i$ the mother-poss.3sg-nom	called	up	him$_i$	cf. (28a)
	b.	*Kinek$_i$ az anyját	hívta	fel	ő$_i$?	
		whose$_i$ the mother-poss.3sg-acc	called	up	he$_i$	cf. (28b)

(28) a. Whose mother called him up?
b. *Who did his mother call up?

Let us accept É. Kiss's judgments in (27) at face value (though, see Note 16 for qualification). What I would like to argue is that even given these judgments, such a subject/object symmetry does not necessarily provide evidence for a flat VP analysis. The

ungrammaticality of (27b) follows if S c-commands O inside the *v*P. As for (27a), I propose that it is ruled out as it is blocked by (29).

(29) Kit$_i$ hívott fel t_i' az (ő$_i$) anyja t_i? [=(3a)]
who-acc called up the his mother-poss.3sg-nom
'*?Who$_i$ did his$_i$ mother call?'

Ruys (1994) argues that, given an interface economy approach (see Reinhart 2006 and references therein), (28b) is blocked in English by (28a), because (28a) is derivationally more economical than (28b), as it involves a shorter *wh*-movement (cf. also Spector 2004). On account of its optionality, scrambling is often taken to incur no derivational cost (see e.g., Fukui 1993, Saito and Fukui 1998, Bošković and Takahashi 1998; note that this follows directly on a base-generation account of scrambling). Recall that I assumed in section 3.1 above that (29) (=(3a)) is well-formed in the first place because of the availability of a derivation involving scrambling of O *above* S prior to *wh*-movement, i.e., to a position that is closer to the left peripheral CP/FocP position than the base position of S. This means that the derivation of (29) involves a shorter *wh*-movement to CP/FocP than (27a), and I propose that this is why (27a) is blocked.

An analogous paradigm is found with universal quantifiers in the place of *wh*-phrases, and the same blocking effect will be triggered. I omit the examples here in the interest of conserving space.[17] Note finally that (27a) is also out in German. German is configurational and has scrambling, hence the same logic of blocking applies there as well.

3.5 Free postverbal constituent order and verb raising

The freedom of postverbal constituent order, i.e. **(vi)**, is clearly not compelling evidence in favor of a flat VP insofar as scrambling can derive the freedom in word order just as well. Scrambling is predicted to be restricted to the postverbal field, once it is assumed that the verb is moved to the head of a functional projection above the *v*P. That the verb is raised into the IP domain (in neutral sentences) is a view shared a.o. by Szabolcsi (1997), Puskás (2000), and Brody and Szabolcsi (2003). The exact identity of the projection hosting the verb will be immaterial for the present purposes. Determining the exact landing site (and potentially, also a trigger) of the Hungarian scrambling movement operation is tangential to the main point of the present paper, and indeed the choice is underdetermined by the data discussed in these pages (e.g., scrambling targeting the *v*P-edge, or the TP-edge are equally conceivable,

depending, of course, on the choice of specific theoretical assumptions; for recent alternatives, see e.g., Bošković and Takahashi 1998, Grewendorf and Sabel 1999, Karimi 2003, Kitahara 2002, Miyagawa 1997, 2001, 2003, and Saito 2003.)[18] Therefore, the issue is not discussed here in any detail.[19]

3.6 A-binding

Finally, the A-binding S/O asymmetries (=**(vii)**) can be captured in a hierarchical *v*P without directly relying on thematic prominence or linear precedence, or indeed a disjunctive definition incorporating both: A-binding facts can be deduced from structural asymmetries in the hierarchical structure in terms of c-command. The issue of A-binding will be taken up and will be dealt with in more detail in section 5.[20]

Having shown that some of the arguments for a flat VP are ill-founded, and others are forceless once a scrambling account is considered as an alternative, in the next section I go on to present phenomena of S/O asymmetries that seriously challenge the non-configurational VP analysis, and directly bolster a scrambling approach (*modulo* a hierarchical *v*P).

4 Arguments in favor of the hierarchical *v*P + scrambling account

In addition to the S/O asymmetry exhibited by universal QPs for WCO, which was discussed in section 3, in this section I point out several other S/O asymmetries. These asymmetries are all problematic for a non-configurational VP approach, but are expected if the Hungarian *v*P is hierarchical.[21]

4.1 Superiority

The first asymmetry to be noted here concerns effects of Superiority, which do obtain in various constructions. The illustrative example in (30) involves *n*-word fronting, where obviation by scrambling (cf. section 3) is dispreferred. Scrambling is disfavored (as an intermediate movement step) in the derivation of (30), due to the fact that the discourse effect that scrambling results in, i.e. familiarity, is incompatible with the non-specific (non-familiar) interpretation of the fronted object *n*-word in (30). In a context, however, where the object *n*-word can be interpreted as specific (quantifying over a familiar set), (30) becomes acceptable. As expected under a configurational analysis of *v*P, if the subject *n*-word is fronted instead of the object *n*-word in (30), the sentence is acceptable once again.

(30) #Nyilvános helyen szerintem senkit se csókoljon meg senki
public place-on in.my.view noone-**acc** NEG kiss-Imp-3sg PV noone-**nom**
intended:'I think nobody should kiss anybody in a public place.'

The same holds true of multiple *wh*-questions in which one *wh*-element is fronted only, asking for a single pair of individuals, in particular, of the type that involves two non-D-linked *wh*-expressions. In the dialogue below, the inspector (I) can ask the witness (W) the question in (a), while question (b) is infelicitous, given that neither of the two *wh*-pronouns is D-linked.

(31) W: I heard the noise of someone slapping someone else in the face behind my back.
I turned around at once.
I: And what did you see?
a. Ki vágott pofon kit?
who-nom hit-past-3sg face.on who-acc
b. #Kit vágott pofon ki?

Scrambling is unavailable to the non-D-linked *wh*-object, whence it can only move to the left peripheral CP/FocP from its VP-internal position. This, however, results in a Superiority effect.

4.2 Movement out of subjects

A second difference between S and O, one that is expected on a configurational analysis of *v*P, is that subjects, but not objects (and other complements) are CED islands, similarly to what we find in English. If not only objects, but subjects are also complements of the verb, as the flat VP account presumes, then such asymmetries are unexpected.

(32) a. ?Melyik tisztviselővel$_i$ olvastál [egy interjút t_i] ?
which official-with read-past-2sg an interview-acc
'Which official did you read an interview with?'
b. *Melyik tisztviselővel$_i$ állitotta [egy interjú t_i], hogy nő a GDP?
which official-with claimed an interview that grows the GDP
'*With which official did [an interview *t*] claim that the GDP is growing?'

4.3 Condition C

Although judgments go in the direction expected on a configurational *v*P account, Condition C effects involving overt nominative and accusative pronouns do not result in a very sharp contrast between S and O, as discussed in section 3.4 (perhaps due to factors discussed there, see especially Note 14). However, Condition C effects do produce a strong S/O asymmetry in the domain of epithets, i.e., definite NPs which are coreferential with, though different in descriptive content from, their antecedent; see (33a–b). These function like pronouns, but can be used for testing purposes here free of the complications associated with pronouns (again, cf. section 3.4). Similarly, we find a marked S/O asymmetry for Condition C in A-bar reconstruction (33c–d), and with lexical DPs (33e–f) (the latter is noted by Marácz 1989, and by Choe 1989). In (33c–d) the object and the subject, respectively, are fronted to the topic position. This A-bar movement is reconstructed to the position marked by the trace (Chomsky 1993, 1995), i.e., to a VP-internal position.

(33) a. János anyja$_k$ nem is látogatja t_k azt a szerencsétlen gyereket.
John's$_i$ mother-**nom** not even visit-3sg that-acc the poor child-**acc**$_i$
'John's$_i$ mother does not even visit that poor child$_i$.'

b. *Az a szerencsétlen gyerek$_k$ nem is látogatja t_k János anyját
that the poor child-**nom**$_i$ not even visit-3sg John's$_i$ mother-**acc**
'*That poor child$_i$ does not even visit John's$_i$ mother.'

c. *[A Jánossal$_i$ való beszélgetésünket]$_k$ később letagadta (ő$_i$) t_k
the J$_i$-with EXPL discussion-poss.1pl-acc later PV-denied-3sg he$_i$
'*He$_i$ later denied our discussion with John$_i$.'

d. [A Jánossal$_i$ való beszélgetésünk]$_k$ rossz színben t_k tüntette fel őt$_i$
the J$_i$-with EXPL discussion-poss.1pl-nom bad color-in showed PV him$_i$
'Our discussion with John$_i$ gave him$_i$ a bad reputation.'

e. Felhívta János$_i$ anyósa Jánost$_i$. [adapted from Marácz 1989]
PV-called-3sg J's$_i$ mother.in.law-**nom** J-**acc**$_i$
'John's$_i$ mother-in-law called John$_i$.'

f. *Felhívta János$_i$ János$_i$ anyósát.
PV-called-3sg J-**nom**$_i$ John's$_i$ mother.in.law-**acc**
'*John$_i$ called John's$_i$ mother-in-law.'

These data demonstrate that Condition C does in fact tease apart subject from object, as far as their base positions are concerned: the subject in Hungarian too originates higher than the object. The same conclusion is suggested by the observation (illustrated in Note 14 above) that while various factors (namely, prosody, topicalization of the DP containing the antecedent possessor, and the case-form of the possessor) influence the acceptability of an object pronoun coreferring with the possessor inside the subject, the same factors do not affect the (non-)acceptability of a subject pronoun coreferring with the possessor contained in the object. This latter fact is predicted on the scrambling account, as only the latter scenario involves a Condition C violation, given a hierarchical VP.[22]

4.4 Scope-taking of non-increasing QPs

Another domain where an S/O asymmetry is detected is scope-taking by postverbal non-increasing QPs (increasing QPs take scope via a mechanism distinct from that involved in scope-taking by non-increasing QPs, see Szabolcsi 1997 and Surányi 2004a for diverging views). A *few*-QP_{OBJ} cannot scope over a uQP_{SUBJ} (34a), while a *few*-QP_{SUBJ} can scope over the uQP_{OBJ} (34b) (see Chapter 2, Section 5.5 for an analogous pair of examples):

(34) TAVALY végzett el . . .
last.year did-3sg PV . . .

a. minden diák kevés kurzust. [S > O, *O > S]
every student-**nom** few course-**acc**
'It was last year that every student did few courses.'

b. kevés diák minden kurzust. [S > O, O > S]
few student-**nom** every course-**acc**
'It was last year that fewer than 100 students did every course.'

This is because decreasing QPs do not take inverse scope higher than their A-position (see Szabolcsi 1997 and Surányi 2004a for detailed discussion and references). The contrast in (34) is explained only of the A-position of the subject is higher than the A-position of the object.[23]

4.5 Incorporation

As Marácz (1989) points out, incorporation of a bare nominal is possible when the nominal is an object, but impossible when it is a subject. This is exactly what is predicted in Baker's

(1988) model of incorporation as involving syntactic (upward) head-movement, provided, of course, that the subject is generated higher than the object.

(35) a. János könyvet olvas
J.-nom book-acc read-3sg
'John read a book.'
b. *Tanár olvas jó könyveket
teacher-nom read-past-3sg good book-pl-acc
'Teacher(s) read(s) good books.'

Thus far I have presented arguments in favor of the approach that incorporates a hierarchical VP (i.e., *v*P) structure and postverbal scrambling (the verb overtly raises out of the *v*P). In the remainder of the paper I demonstrate that the reordering of object to the left of the subject in the postverbal field indeed has the properties of (a certain type of) scrambling movement.[24]

5. Probing the properties of Hungarian scrambling

If Hungarian indeed has a configurational vP, with the subject generated higher than the object, and postverbal object–subject order is indeed the result of scrambling movement, we expect sentences with this order to exhibit properties normally displayed by scrambling orders in well-known scrambling languages. Given that several distinct types of scrambling languages and scrambling operation types have been described in the literature (cf. e.g., the German-type vs. Slavic-type vs. Japanese type oppositions), probing the properties of what I have assumed to be a scrambling movement will also involve situating Hungarian scrambling (descriptively) within the scrambling typology.

5.1 Scrambling and anaphor binding

Scrambling of the object above the subject feeds the binding of anaphors in the possessor position of the subject in Hungarian (see 36a–b).

(36) a. *?Sokat kritizálják egymás szülei Jánost és Pétert
lot-acc criticize-3pl each other's parents-nom J.-acc and P.-acc

b. ?Sokat kritizálják [Jánost és Pétert]$_i$ egymás szülei t_i
lot-acc criticize-3pl J.-acc and P.-acc each other's parents-nom
'John and Peter are criticized a lot by each other's parents.'

This property is characteristic of Japanese local scrambling (cf. (37) below, see Saito 1992: 74f.); whereas it is not shared by German, Slavic or Albanian scrambling (see, e.g., Grewendorf and Sabel 1999, Kitahara 2002, Saito 2003, Karimi 2003, and references therein). (38) exemplifies the case of German.

(37) a. ?*[[Otagai-no sensei]-ga karera-o hihansita] (koto)
each other-gen teacher-nom they-acc criticized (fact)
b. ? [Karera-o$_i$ [[otagai-no sensei]-ga t_i hihansita]] (koto)
they-acc each other-gen teacher-nom criticized (fact)
'Each other's teachers criticized them.'

(38) a. *. . . weil [die Lehrer von sich$_i$] zweifellos den Studenten$_i$
since [the teachers-nom of SICH] undoubtedly the student-acc
in guter Erinnerung behalten haben.
in good memory kept have
'*The teachers of himself have undoubtedly kept the student in good memory.'
b. *. . . weil [den Studenten]$_i$ [die Lehrer von sich$_i$] zweifellos t_i
since the student-acc [the teachers-nom of SICH] undoubtedly
in guter Erinnerung behalten haben.
in good memory kept have (Grewendorf and Sabel 1999)

This follows if Hungarian scrambling is or can be A-movement and Condition A is an 'anywhere condition' in the sense of Belletti and Rizzi (1988), Epstein et al. (1998), among others. The anaphor inside the subject is A-bound by the scrambled object in (36b).[25]

Scrambling also feeds pronominal variable binding, both in Hungarian (see (39a–b)) and in Japanese (see, e.g., Saito 2003: 485) (but not in German, see Grewendorf and Sabel (1999) (=G&F 1999)), to which the same explanation will extend.

(39) a. *?EBBEN A VÁROSBAN bántalmazott [*pro* több diákja]
this-in the town-in assaulted *pro*$_i$ several student-poss.3sg-nom
[kevés tanárt]
few teacher-acc$_i$
b. EBBEN A VÁROSBAN bántalmazott [kevés tanárt]$_i$ [*pro*$_i$ több diákja] t_i
'It's this town where few teachers were assaulted by several of their students.'

5.2 Scrambling and Condition C

Postverbal scrambling in Hungarian does not feed or obviate Condition C:

(40) a. Látta (ön)magát$_i$ János t_i a tükörben
saw-3sg (his-)himself-acc$_i$ J-nom t_i the mirror-in
'John saw himself in the mirror.'
b. **Látták a fiúk anyját$_i$ ők t_i [cf. the discussion of (5)]
saw-3pl the boy-pl$_i$ mother-acc they-nom$_i$ t_i
'*They$_i$ saw the boys'$_i$ mother.'

The same holds true of Japanese short (i.e., local) scrambling:

(41) a. [Zibunzisin-o$_i$ [John-ga t_i semeta]]
himself-acc$_i$ J-nom t_i blamed
'John blamed himself.'
b. *[[John-no hahaoya]-o$_i$ [kare-ga t_i semeta]]
J-gen mother-acc$_i$ he-nom t_i blamed
'*He$_i$ blamed John's mother$_i$.'

5.3 Scrambling and WCO

The Hungarian short scrambling operation does not induce WCO effects, rather, it obviates WCO violations. This was demonstrated by examples (23–24) in section 3.1 above. Note that if the object universal QP moves only as far as the t_i' position in (24) (object scrambling without the extra QP-fronting step in (24)), the result is still grammatical, see (42) below).

(42) [(?)]Felismerte [mindegyik lányt]$_i$ [az a férfi, aki bement pro_{3SGi} hozzá] t_i
recognized-3sg every girl-**acc**$_i$ that the man-**nom** who in-went-3sg to.her$_i$
'*?The man who dropped by her$_i$ recognized every girl$_i$.'

Japanese type scrambling (and also German type scrambling, see (44)) exhibits analogous contrasts:[26]

(43) a. ?*[[Soitu$_i$-no hahaoya]-ga [dare$_i$-o aisiteru]] no?
the guy-gen mother-nom who-acc love Q
'??Who does his$_i$ mother love t_i?'
b. ?Dare$_i$-o [[soitu$_i$-no hahaoya]-ga [t_i aisiteru]] no?
who-acc the-guy-gen mother-nom love Q (Saito 1992:73)

(44) a. *. . . weil seine$_i$ Mutter jeden Studenten$_i$ liebt.
since his mother-nom every student-acc loves
'*His$_i$ mother loves every student$_i$.'
b. . . . weil [jeden Studenten$_i$ [seine Mutter$_i$ t_i liebt]].
since every student-acc his mother$_{nom}$ loves (G&F 1999)

5.4 Scope

If scope interpretation in a subject–object order is unambiguously S > O, as in (34a) above, reproduced here as (45), scrambling of the object over the subject introduces scope ambiguity, as in (46).

(45) TAVALY végzett el minden diák kevés kurzust. [S > O, *O > S]
last.year did-3sg PV every student-nom few course-acc
'It was last year that every student did few courses.'

(46) TAVALY végzett el [kevesebb mint öt kurzust]$_i$ minden diák t_i [S > O, O > S]
last.year did-3sg PV fewer than five course-**acc**$_i$ every student-**nom** t_i
'It was last year that every student did fewer than 5 courses.'

The same holds true of Japanese, and German too. (45) illustrates the case for Japanese: while in the subject–object order only a direct scope interpretation is available, when the object is scrambled to the left of the subject, both scope interpretations become available.

(45) a. Dareka-ga daremo-o aisite iru.
someone-nom everyone-acc loves
'Someone loves everyone.' $\exists > \forall$ / $*\forall > \exists$

b. Daremo-o$_i$ dareka-ga t_i aisite iru.
everyone-acc someone-nom loves
'Someone loves everyone.' $\exists > \forall$ / $\forall > \exists$

All in all, the basic properties of the postverbal reordering under scrutiny here appear to most closely match those of Japanese short scrambling.[27] This provides strong confirmation for the proposal that this reordering indeed involves scrambling in Hungarian.[28]

6 Checking typological correlations

Before concluding this chapter let us inspect two more general questions that bear on the issue raised in this paper: first, whether Hungarian shares the properties of well-studied non-configurational languages, and second, whether Hungarian is characterized by the features that are commonly seen as correlates of the scrambling property. The relevant typological correlations may provide indirect support for the scrambling movement approach I have put forward.

The theme of (non-)configurationality has occupied center stage in research in free word order beginning from the late seventies. It has been established by now that, scrambling aside, non-configurationality is not a syntactically uniform phenomenon: non-configurational languages belong to two (or possibly more) main groups (see, e.g., Baker 2001, and references therein). *Pronominal argument languages* (aka *head-marking languages*, e.g. Mohawk, cf. Nichols 1986, Jelinek 1984) are characterized among others by the absence of Condition C effects within a clause, presence of WCO effects both with subjects and with objects, absence of NP anaphors, absence of non-referential quantifiers (e.g., 'nobody', or universal quantifiers with singular agreement), discontinuous constituents (e.g., separability of determiners from their NP) and massive *pro*-drop (cf. Baker 1996). In contrast, *dependent-marking languages* like Warlpiri (to which Jelinek's 1984 account is not straightforwardly applicable) are characterised by the absence of WCO effects as well as by the presence of

Condition C effects with subjects and objects alike. This latter language type is treated by Speas (1990) and Baker (1996) by generating their lexical arguments as secondary predicates, which are coindexed with *pro* elements in argument positions (sharing this latter aspect with Jelinek's 1984 treatment). Secondary predicates are VP-internal, and hence are c-commanded by the Case positions of both objects and subjects, whence the absence of WCO effects and the presence of Condition C effects with both subjects and objects on that account. As predicted by the '*pro*-as-argument' analysis (common to head-marking and dependent-marking languages), Warlpiri allows *pro*-drop in all argument positions, it does not allow non-referential NPs as true quantifiers or simple NP anaphors (like Mohawk), and as predicted by the 'lexical-arguments-as-secondary-predicates' hypothesis characterising dependent-marking languages, the nominal/adjective distinction is neutralised in Warlpiri (e.g., nouns have no true articles, they can function as attributive modifiers and as secondary predicates quite freely), a nominal (and secondary predicates in general) cannot be separated from its clause, discontinuous constituents are extremely free (all these properties are absent from Mohawk) (see Baker 2001).

Hungarian differs significantly both from head-marking and from dependent-marking non-configurational languages. It allows only subject *pro*-drop fully, object *pro*-drop is severely restricted, and non-object complement *pro*-drop is absent. WCO is absent from local *wh*-movement contexts, but is attested clause-internally in some other constructions. Condition C effects are present in some cases where English does not have them, but its distribution is narrower than in dependent-marking languages. Hungarian has NP anaphors and non-referential quantifier NPs. Discontinuous expressions are atypical (e.g., the possessor is in some cases separable from the possessed noun), and are amenable to a movement analysis (see Szabolcsi 1983). The nominal/adjective distinction is prominent, and nominals can move out of their local clause into superordinate clauses. In short, Hungarian does not fall neatly into either one of the two best studied major classes of non-configurational languages.

On the other hand, a number of implications involving scrambling that have been noted in the literature are apparently applicable to Hungarian. A frequently advocated generalization is that scrambling implicates V-raising (e.g. Tada 1993, Saito 1992, Miyagawa 2001). As I show in Surányi (2009b), the verb always undergoes movement out of the *v*P. It has been suggested that scrambling languages are *pro*-drop languages (e.g., Grewendorf and Sabel 1999); as pointed out above, Hungarian has *pro*-drop. Head-finality of the VP is also often assumed to be as a correlate of scrambling (e.g., Fukui 1993, Haider and Rosengren

2003). Given that the verb is invariably raised out of the VP in Hungarian, an underlying OV analysis is compatible with Hungarian (note also that PPs, NPs and attributive AdjPs are all head-final in the language).[29] A last feature to be mentioned here that is sometimes (rather controversially) claimed to be implicated by the scrambling property is rich morphology, more specifically, rich case morphology or/and rich verbal agreement. Both of these characterize Hungarian.

In sum, Hungarian is essentially different from the two well-known types of non-configurational languages, while it (potentially) fits all the descriptive generalizations concerning scrambling languages we reviewed here, which lends further plausibility to the scrambling approach I am advocating.

7 A radically free word order alternation?

The main result of this chapter is that it eliminates an alleged residual idiosyncrasy of Hungarian, the non-configurationality of its verb phrase, which goes against the Uniformity of Grammars hypothesis of the minimalist research program (see Chapter 1), by demonstrating systematically that a scrambling approach, based on a configurational *v*P, is readily formulable, and what is more, it is empirically superior. Modulo scrambling, Hungarian is configurational not only in its left periphery, i.e., its pre-verbal domain, but all the way down. It has also been shown that postverbal object–subject reordering in this language is akin in particular to short scrambling of the Japanese-type (and contrasts in crucial ways with German or Slavic scrambling). Due to verb raising, what occurs in the best-studied scrambling languages to the left of the verb characterizes the postverbal field in Hungarian.

It is not the purpose of this chapter to choose from, or evaluate, alternative approaches to Japanese/Hungarian-type local scrambling. Of course, if the main conclusions reached here can be upheld, a more microscopic study of the properties of Hungarian scrambling can serve as excellent testing ground for current competing accounts of Japanese-type scrambling, with repercussions for the ongoing debate over the proper typology of scrambling in general.

The lack of a systematic semantic effect associated with scrambling precludes a SEM-interface based treatment of this apparently free alternation. Any semantic effects that are found, including those involving A-binding possibilities and options of scope interpretation,

are those that arise as a by-product of being located in the hierarchical positions that the scrambled element subject to the alternation occupies in relation to other elements.

A feature-checking based treatment is also unfeasible, because no interpretable feature or property could be identified as a counterpart of a postulated uninterpretable feature that would trigger the scrambling movement.

If there is neither feature-checking nor a systematic semantic effect involved, then the scrambling movement in Hungarian is apparently untriggered. If so, this would go against a basic tenet of the minimalist research program, viz. the concept of the Last Resort property of syntactic movement operations. In terms of the notions in Chapter 1, the word order alternation under scrutiny appears to be radically free. If correct, this would certainly be a noteworthy conclusion. Before jumping to it too soon, we return to the issue in the next chapter, where I propose to identify the trigger of the scrambling movement, drawing on an intriguing analogy with certain syntactic uses of relatively high adverbials.

Notes

[1] Drawing on this body of work, in a recent paper É. Kiss (2008), proposes a modification of this view: the relevant nuclear constituent of the clause is not base-generated as non-configurational, but becomes flat in the course of the syntactic derivation. The detailed comparison of this recent hybrid approach with the one put forward in the present chapter is left for another occasion.

[2] To keep a reasonable depth of subject matter, I will limit the discussion to the base position of the subject and the direct object; the placement of postverbal internal arguments and adjuncts cannot be addressed within the confines of this paper. Nevertheless, the scrambling operation envisaged to apply in Hungarian displaces not only direct objects, but also other internal arguments, including not only DPs but PPs as well.

[3] In É. Kiss (1994a), the VP is flat and there are no inflectional projections like AgrPs or TP in the clause. Her (2002) survey of Hungarian syntax does adopt inflectional projections for the treatment of inflectional morphology, but these projections are assumed to play no role in the syntax of arguments.

A terminological caveat is also in order: permutation in the flat VP has also been referred to as ‘scrambling’ in the literature on Hungarian. Clearly, this sense of the term should be kept apart from the claim made in the present paper.

[4] This is not to say that the configurational view has lacked proponents (e.g., Horvath 1986, Marácz 1989, and Speas 1990; cf. also Kenesei 1989). Nevertheless, the proposed implementations of a configurational approach were partly incomplete and partly descriptively inadequate, and/or relied on analytic devices that are no longer available (or, in some cases, even formulable) in the current restrictive framework.

[5] This fact is exemplified by Puskás (2000: 293), however, her example is ungrammatical independently of the WCO configuration; the one in (4a) is out exclusively due to WCO (the degradation is only aggravated by whatever factor determines long *wh*-movement to be felt marked by many speakers of Hungarian, compare (4b)). Puskás's example is (i). (i), however, is independently rendered ungrammatical, on the one hand, by the choice of affixation on the embedded verb, which in (i) agrees with a definite object (*wh*-pronouns are known to trigger indefinite object agreement conjugation on the selecting verb). But even granting the correct (indefinite) agreement form of the embedded verb, the example is out (even when it involves a matrix subject that does not contain a bound pronominal, cf. (ii), where *pro* in indexical), because the matrix verb form is also incompatible in (i) with an object *wh*-pronoun long-moved into the matrix clause, which routinely triggers indefinite object agreement on the matrix verb.

(i) *Kit$_i$ mondta az *pro*$_i$ anyja, hogy a fiúk látták t$_i$?
who-acc said.3sg.defobj the (his) mother-nom that the boys-nom saw.3pl.defobj
'*Who did his mother say the boys had seen?'

(ii) *Kit$_i$ mondta az *pro* anyád, hogy a fiúk láttak t$_i$?
who-acc said.3sg.defobj the **your** mother-nom that the boys-nom saw.3pl.**indef**obj

Note that the acceptability of long *wh*-movement is known to exhibit a certain degree of variation among speakers: the spectrum goes from speakers who find them perfectly acceptable and also use them in their speech to those that flatly reject them. Of course, the contrast above exists only for speakers who accept long *wh*-movement constructions to begin with.

[6] Brody (1995) argues that when undergoing *wh*-movement, objects touch down in a Case-checking specifier, [Spec,AgrOP], an A-position from which the *wh*-object c-commands and A-binds the pronoun within the VP-internal subject. This is claimed to be the reason why WCO is unattested with short *wh*-movement in Hungarian. It is irrelevant that this Case-related position is identified as the *v*P-edge in the more recent AgrP-less clause structure model: what is crucial is that it has the property of being above the base position of the subject. Precisely this latter property is argued against and is rejected by the Johnson–Koizumi–Lasnik approach to object Case checking, also embraced by Chomsky in his most recent work, according to which the Case position of the object is higher than its own base position, but lower than the base position of the subject. Independently of this choice,

however, there are a number of empirical problems with the suggestion. For one thing, the same WCO-obviating derivation is expected to be available with long *wh*-movement too, since long-moved *wh*-objects trigger (indefinite) object agreement on the matrix verb, which indicates that the moved *wh*-object passes through matrix AgrOP. Then, the WCO-effect is predicted to be obviated with long movement of *wh*-objects, which is contrary to fact, cf. (i) (vs. (ii)). Another inadequacy of Brody's (ibid.) Case-position based proposal is that it fails to extend to non-object internal arguments, which behave on a par with objects with regard to WCO, but which do not bear structural Case, and consequently are not related to a Case-checking position above the subject. Finally, as also pointed out by É.Kiss (2002), it is unclear why the same derivation (with an identical WCO-obviation effect) does not occur in English.

(i)	*?Kit$_i$	mondott	az *pro*$_i$ anyja,	hogy	megláttak	t_i ?
	who-acc	said.3sg.indefobj	the (his) mother-nom	that	PV-saw.3pl.indefobj	
	'*Who did his mother say that they had seen?'					
(ii)	?Kit$_i$	mondott	az *pro* anyád,	hogy	megláttak	t_i ?
	who-acc	said.3sg.indefobj	the (your) mother-nom	that	PV-saw.3pl.indefobj	
	'Who did your mother say that they had seen?'					

[7] Deletion rules also operate without a subject/object asymmetry, see (i). This has no bearing on the configurationality issue, however, since in these constructions the element escaping deletion (whether a subject or an object) is moved out of the ellipsis site prior to deletion (by focusing, topicalization or some other A-bar movement) (see É. Kiss 1994a, 2002).

(i) a.	Marinak	VIRÁGOT	vett	János,	Zsuzsának	pedig	CSOKOLÁDÉT	(É. Kiss 1987a, (11))
	M.-dat	flower-acc	bought	J.-nom	Zs.-dat	as.for	chocolate-acc	
	'As for Mary, John bought her FLOWERS, and as for Susan, he bought her CANDY.'							
b.	Marinak	JÁNOS	vette	a virágot,	Zsuzsának	pedig	PÉTER	
	M.-dat	J.-nom	bought	the flower-acc	Zs.-dat	as.for	P.-nom	
	'As for Mary, JOHN bought her the flowers, and as for Susan, PETER bought her the flowers.'							

[8] Notice that the flat VP structure causes Condition C to be violated in examples like (17b): the anaphor binds the referential expression within a flat VP. Condition B appears to be violated in a flat VP in examples like (i) below. In É. Kiss (2002), these unwelcome consequences are prevented by assuming the principle in (ii): since the subject DP can bind the thematically less prominent object DP, the object cannot bind the subject, so Condition B and Condition C are in fact not disobeyed.

(i)	Ő / *pro*	megölte	magát

he-nom /*pro*-nom PV-killed-3sg himself-acc
'He killed himself.'

(ii) *The asymmetry of binding*
If *a* can bind *b*, *b* cannot bind *a*.

Note that É. Kiss's Primacy Condition involves notions (relative thematic prominence, linear precedence) that are not directly available to build a grammatical analysis on within the current mainstream minimalist framework, where thematic roles are configurationally encoded in an articulated verb phrase structure (Hale and Keyser 1993), and linear order is not encoded in syntactic structure (Kayne 1994). This Primacy Condition is actually akin to analogous principles of prominence utilized within the LFG framework in order to restrict binding relations. For instance, Bresnan's (1995, 1998) Prominence Principle involves a hierarchy of grammatical functions, precedence and thematic prominence; languages are then claimed to vary as to which of these constraints are active (which aspect of Bresnan's approach is, once again, not transposable to a minimalist model).

[9] As far as Superiority violations are concerned, various other alternative analyses might in principle be applicable. For instance, Bošković contends in a series of papers (see Bošković 2002 and references therein) that if a functional head attracts (and enters an Agree relation with) multiple instances of the same feature, the attracted elements can move to the functional head in any order, given that the same total number of nodes will be crossed whatever the order of the movements. Based on work by Reinhart (1993/1997, 1998) and Fox (1995, 1998, 2000) on what has come to be termed 'interface economy' phenomena, another possible line is to argue that Superiority-violating multiple *wh*-fronting orders are licensed qua economy violations because they target an interpretation that cannot be achieved by the non-Superiority violating *wh*-order (an approach embraced in Fanselow 2004; see also Surányi 2002: Ch. 6 for this point). Indeed the sorting keys (cf. Kuno 1982) in (6a) and (6b) above are different, and accordingly, appropriate answers differ too. (i.a) can answer (6a) but not (6b), and (i.b) can answer (6b) but not (6a).

(i) a. [$_{TOP}$ János] [$_{FOC}$ tortát] csinált, [$_{TOP}$ Mari] [$_{FOC}$ jégkrémet], ...
J.-nom cake-acc made-3sg M.-nom ice-cream-acc, ...
'John made a cake, Mary made ice-cream, ...'

b. [$_{TOP}$ A tortát [$_{FOC}$ János] csinálta, [$_{TOP}$ a jégkrémet [$_{FOC}$ Mari], ...
the cake-acc J.-nom made-3sg the ice-cream-acc M.-nom
'The cake was made by John, the ice-cream by Mary, ...'

[10] However, the disjunctive definition runs into a problem with simple cases like (i).

(i) *Szereti Jánost önmaga
love-3sg J-acc himself-nom

If binding of B by A is licensed either if A thematically more prominent than B, or if A precedes B, then (i) is predicted to be grammatical, contrary to fact. If, however, only thematic prominence matters, but linear precedence does not (cf. É. Kiss 2002), then the apparent feeding effect of placing the object to the left of the subject on A-binding of anaphors and pronominal variables, which I analyze here as an effect of scrambling, and which is discussed extensively in É. Kiss (1991, 1994a) (see also (7), as well as section 6 below for examples of this), is left without any account.

[11] Brody (1989) discusses the example below, which he marks as *?. É. Kiss (1994b) claims that context can improve it into a grammatical, though still degraded, sentence (namely, if the universal QP quantifies over a familiar and salient set). These judgments fall into place under the present view. If the set quantified over by the universal quantifier is familiar/salient, then it can (somewhat marginally) function as an information structural topic. In this case, on its way to the left peripheral landing site, the QP can touch down in a scrambled position, which explains (23b). If, however, these conditions are not met, then a universal QP like *mindenkit* 'everyone' is difficult to be construed as a topic, it will normally function instead as the information focus of the sentence (in this case the immediately following complex verb can undergo stress eradication). This discourse structural status does not allow the QP to undergo scrambling prior to QP-fronting, whence it is fronted to the left periphery in one step, giving rise to a WCO effect.

(i) *?Mindenkit felismert a férfi, aki belépett a szobájába (judgment from Brody 1989, (4b))
everyone-acc PV-recognized the man-nom who in-stepped the (her) room-in
'*The man who entered her room recognized every girl.'

Dobrovie-Sorin (1990) notes an analogous contrast in Romanian in the domain of *wh*-elements: only D-linked object *wh*-phrases can escape inducing a WCO violation, whereas non-D-linked *wh*-expressions cannot. It is interesting in the present context to also note a recently discovered parallel in English. Ishii (2006) shows that object *which*-phrases (i.e., overtly D-linked *wh*-expressions) in English fail to show a WCO effect in their local clause, which he ascribes to the movement step that targets the *vP*-edge (performed by *wh*-objects in the course of their successive cyclic movement to CP). Given that this intermediate step (which is likened by Ishii to scrambling) may count as an A-movement operation only in the case of D-linked *wh*-phrases, the obviation effect of this movement operation is limited to *which*-phrases.

[12] These two examples involve a possessor that has been extracted out of the underlying complement DP (cf. Szabolcsi 1983). Idioms with an open possessor slot are possible, independently (e.g. *cat got* x*'s tongue*), as the possessor is not an argument of the verb.

[13] Nunberg, Sag and Wasow (1994) argue that many idioms are in fact compositional: the parts of these idioms have contextually restricted metaphorical interpretations, which combine transparently (see also Marantz 1997).

[14] See Martin Everaert's clarificatory note on the Linguist List, Vol-4-122.

[15] A similarly strong contrast is found with overt oblique case-marked internal argument pronouns, which lack a covert counterpart, see (i-ii). (More precisely, oblique pronominal expressions are realized as an element corresponding to the oblique case marker, whose morphosyntactic form is that of a possessed noun head, and whose possessor is the personal pronoun itself, typically a *pro*).

(i) ? A legjobb barátom$_i$ anyja gyerekként egyáltalán nem foglalkozott vele$_i$
the best friend-poss.1sg mother-nom child-as at.all not took.care with.him
'My best friend's$_i$ mother didn't take care of him$_i$ as a child at all.'

(ii) *A legjobb barátom$_i$ anyjával idős korában nem foglalkozott ő$_i$ egyáltalán
the best friend-poss.1sg mother-with old age-poss.3sg-in not took.care he at.all
'*He$_i$ did not take care of my best friend's$_i$ mother in her old age.'

It must be noted that prosodic context seems to affect the acceptability level of sentences like (16): when followed by a stress-bearing element (as in (iii)), the acceptability profile of sentences like (16) involving an overt object pronoun improves noticeably. As has been noted in the main text, it also enhances acceptability if the object pronoun is not separated from the verb by a stress-bearing element. Using a dative possessor instead of the nominative form is another factor that increases acceptability for some speakers. By contrast, none of these factors alter the judgment of overt subject pronouns.

(iii) ?(?)Hét közben már nem is hívja fel a fiúk anyja őket egyáltalán
week during anymore not also calls up the boys-nom mother-poss.3sg-nom them at.all
'The boys' mother does not call them anymore at all during the week.'

[16] As for the reason for the preference of personal pronouns to surface immediately after the verb (or verb plus particle), it can be speculated that this is due to their prosodic properties and/or the familiarity of their referents. On either account, it may well be that they preferably undergo scrambling (to the right of the verb).

If this is correct, then it makes available two potential ways to capture why sentences of type (16) are degraded. One possibility is to construe (16) as involving the scrambling of both S and O

(call this ‘dual scrambling’): in this case the scrambled object pronoun will bind the base copy of the R-expression inside the subject. The fact that a scrambled object anaphor does not give rise to ungrammaticality even though it c-command the base copy of their antecedent R-expression in seeming violation of Condition C does not in intself speak against such a ‘dual scrambling’ analysis of the degradation of (16). This is because this particular behavior of object anaphors in relation to the subject R-expression is well-known to be an independent property in scrambling languages as different as Japanese, Hindi, Korean, German and Georgian (a property put down to ‘lethal ambiguity’ by McGinnis (2004)); see (40) for the Hungarian example. What argues against this account, however, is that object personal pronouns are known not to be exempt, in the manner object anaphors are, from inducing a Condition C violation in the very same language type, as they are not in Hungarian either (see (i) below).

(i) *Tegnap felhívta [őket]$_i$ [a fiúk$_i$ anyja] *t*
yesterday up-called-3sg them the boys-nom mother-nom
‘Yesterday the boys’ mother called them up.’

According to the second possibility, (16) is construed as not involving scrambling at all, and its degradation is therefore due to the above-mentioned preference of personal pronouns to undergo scrambling, which the object pronoun in (16) fails to satisfy. Scrambling the object pronoun to the left of the subject in (16) cannot help either: in such a scenario the object personal pronoun binds the R-expression within the subject from its scrambled position, inducing a Condition C violation (see (i)).

[17] In a late lexical insertion model like Distributed Morphology, one can have (27a) and (29) stem from the same Numeration, if one makes the assumption that *wh*-pronouns in Hungarian are nothing else but (spellout forms corresponding to) pronouns in the local context of a *wh*-feature (either on D or on Foc); this matter will not be pursued here. In fact, Ruys’ (1994) conception of blocking in (28) derives from the view that the competing (reference) set of derivations is determined by interpretive equivalence, rather than on a Numeration of lexical items (see also Fox 2000 and Reinhart 2006 and references therein; the special relevance of Fox’s implementation of this view is that his account is formulated in terms of the relative length of movement paths).

The interface economy approach is supported by the fact that if the *wh*-element *ki(nek)* ‘who(se)’ in (27a) is replaced by the a D-linked *wh*-phrase like ‘which boy,’ then (27a) improves significantly, see (i). (In comparison, performing the same replacement in (27b) does not result in any improvement.) By the same logic of blocking as applied above, (i) should be degraded just as much as (27a) is, given that there exists a more economical derivation targeting the same interpretation (involving object scrambling prior to *wh*-movement), see (ii). The reason why the same logic is inapplicable to (i–ii), I believe, lies in the fact that (i) and (ii) are not entirely synonymous: informally,

while (i) is a question about a set of mothers (as a function of a set of boys), the question in (ii) quantifies directly over a set of boys. The non-identity of LF representations of (i) and (ii) actually follows on Rizzi's (2001) theory of A-bar reconstruction, whereby only non-D-linked *wh*-expressions have their descriptive restriction part obligatorily reconstructed, whereas the same is not enforced in the case of D-linked *wh*-phrases, whose lexical restriction is contextually given, topic-like, and as such they can remain in the left periphery, licensed there as topics generally are (cf. also Heycock 1995). Thus, the lexical restriction undergoes reconstruction in (27a), yielding the same LF representation as (29), which can be informally given as *?x. x's mother called x*. In contrast, the lexical restriction does not necessarily reconstruct in (i) (see Shavrit and Guerzoni (2003) for an argument for the stronger view that it cannot), therefore it can (or, following Shavrit and Guerzoni (ibid.), it must) produce an LF representation different from that of (ii).

(i) ?(A három közül) melyik fiúnak$_i$ az anyja hívta fel őt$_i$ idejében?
the three out.of which boy-dat the mother-poss.3sg-nom called up him time.in
'Out of the three boys, which boy's mother called him in time?'

(ii) (A három közül) melyik fiút$_i$ hívta fel az (ő)$_i$ anyja idejében?
'the three out.of which boy-acc called up the mother-poss.3sg-nom time.in

To the extent that one can interpret *kinek az anyja* 'whose mother' in (27a) as D-linked in a given context, the same processes that I have argued to apply in (i) can—to some degree—mitigate the unacceptibility of (27a) (here the descriptive restriction, besides *person*, are derived from the discourse context). Indeed, a number of speakers that I have consulted find (27a) marginally acceptable (once again, the factors discussed in section 3.4 in relation to (16) apply to (27a) as well, to the relative improvement of its acceptability).

Note that the present account of (27a) presupposes that the subject cannot raise to a srambled position: otherwise the *wh*-movement of the subject in (27a) and the *wh*-movement of the scrambled *wh*-object in (29) could be equally short, in which case (29) could not block (27a). That local subject scrambling is unavailable is argued (for Japanese) by Saito (1985), and is a reasonably well-established generalization in the literature on Japanese-type scrambling (see Ko 2005 for evidence for an opposing view).

[18] Note that if scrambling targets the *v*P-edge, say, by adjunction to *v*P, then the blocking analysis of (27a) and (29) is compatible only with such a metric of movement paths that is sensitive only to categories that *properly contain* the moved element at its pre-movement position. Such a metric determines the movement of a scrambled object (as in (29)) to be shorter than the movement of a subject out of a *v*P where no object scrambling has taken place (as in (27a)). If the target of scrambling is (exclusively) the *vP*-edge, then it must be ensured that adjuncts can intervene between a

scrambled phrase and the subject in [Spec,*v*P] (because an *Object* > *Adjunct* > *Subject* postverbal order is well-formed in Hungarian). Neither of these two conditions applies to an approach that takes scrambling to target the TP-edge (or allows scrambling to target either the *v*P-edge or the TP-edge). This latter account presupposes that the verb in a neutral clause sits in a functional projection even higher than the TP (say, in the head of the projection whose specifier is occupied by the verbal particle in a neutral sentence). An advantage of the former view, however, is that it can straightforwardly account for the unavailability of subject scrambling (see the previous Note), which would be vacuous movement taking place within the edge of the same projection (viz. *v*P).

[19] Although it apparently provides a simple account of postverbal free word order, adopting a flat VP implies giving up the binarity of Merge, and it is also diametrically opposed to what Kayne's Linear Correspondence Axiom (LCA) permits (one of the consequences of the LCA is that "if two phrases differ in linear order, they must also differ in hierarchical structure," Kayne 1994: 3). É. Kiss (2002) speculates that "a relaxed version" of Kayne's (1994) LCA is not necessarily at odds with a flat VP: elements under VP are unordered precisely because they do not asymmetrically c-command each other. This "relaxed version" is not provided, however. Should the LCA be relaxed in such a way as to allow structures involving symmetric c-command, as in the case of a flat VP, a whole range of welcome results of LCA-based syntax would be effectively lost (among others, the way aspects of X-bar theory are derived by the LCA).

[20] As Surányi (in press) shows in some detail, Hungarian does not share the properties of either one of the two well-studied classes of non-configurational languages. This further weakens the position of the flat VP approach.

[21] These asymmetries are not covered by the Primacy Condition on binding (cf. **(vii)** in section 2).

[22] Returning to the examples with covert (*pro*) pronouns in (26), it is conceivable that they do not involve binding per se, in which case (26) is analogous to (33e–f) above (cf. Reinhart 1983). Without a context, (26a) is strongly ungrammatical. The possessor in (26) is apparently not salient enough in itself, i.e., without a context, to license a *pro*, which is known to require a highly salient antecedent. This is confirmed by the examples below, where the *pro* element is one clause down from the possessor, whence Condition C cannot explain why these sentences are out.

(i)	*Mari$_i$ anyjának	elmondtam,	hogy	nem	kedvel	*pro*$_i$	már	engem
	M.-nom mother-dat	PV-tell-past-1sg	that	not	like-3sg	(she)	anymore	me
	'I told Mary's mother that she doesn't like me anymore.'							
(ii)	*Mari$_i$ anyjának	elmondtam,	hogy	nem	kedvelem	*pro*$_i$	már	
	M.-nom mother-dat	PV-tell-past-1sg	that	not	like-1sg	(her)	anymore	
	'I told Mary's mother that I don't like her anymore.'							

Oblique pronominals seem to tolerate an antecedent with the degree of salience associated with a possessor, as witnessed by (i) of Note 14 above.

Following this line of thought, a potential explanation for the degradedness of É. Kiss's example (16) as well as that of (27a) could be based on the requirement of the degree of salience (accessibility) imposed by the overt third person pronoun on its antecedent. The degradedness of (26) may then follow, insofar as a possessor in the subject is simply not salient enough to serve as an antecedent of an overt third person object pronoun either. Indeed, if *pro* in (i) is replaced with an overt pronoun, the acceptability of the sentence does not significantly improve. The accessibility requirements of anaphoric forms are known to vary (see e.g., Ariel 1994); this might be the reason underlying the fact that the Hungarian data involving overt personal pronouns (in object position) differ from their English counterparts. That it is not c-command, but salience that is at issue in (16) is also compatible with the observations based on examples like (33a–b): it is well-established that epithets impose a different requirement of salience than third person pronouns. Another factor that matters for salience is the level of embedding. The more deeply the antecedent is embedded, the less salient it is. Thus it is expected that the overt third person object pronoun will be able to take as its antecedent a non-possessor nominal inside the subject, as in (33d). The fact that for some speakers dative possessors inside the subject are better licensors of coreferential object pronouns than nominative ones can also be made sense of in the very same terms, given that the dative possessor is known to occupy a higher (in fact, a left-peripheral) position within the DP than their nominative counterpart. Topicalization of the subject DP, which is another improving factor in the licensing of the object pronoun (see Note 14) can be also explained in terms of accessibility: topicalization enhances the salience of the antecedent possessor. I have not been able to study the salience requirements of the various pronominal forms in sufficient detail, therefore these considerations remain tentative, and will not be pursued here any further.

[23] As for increasing quantifiers like universal QPs, their relative scope in the postverbal domain is known to be free with respect to each other (e.g., É. Kiss 2002; see also Chapter 2) (even though stress seems to influence relative scope for many speakers). This situation is not different from that of languages like English, where verb phrase internal increasing quantifiers can also take both wide and narrow scope with respect to each other (with some exceptions, like the double object construction, which, however, lacks a direct counterpart in Hungarian). This basic fact of English is conveniently captured in a standard Quantifier Raising based approach, and in Chapter 2 I proposed to apply a QR-based analysis to Hungarian as well (contra Szabolcsi 1997). As for focused elements, they also exhibit freedom of relative scope within the postverbal domain, a generalization that I argued to capture in terms of covert focus movement in Chapter 3. In short, the apparent lack of syntactic restrictions of postverbal relative scope does not bear on the issue of the configurationality of the verb phrase.

[24] It has also been pointed out for Hungarian (e.g., Speas 1990) that PRO in non-finite clauses can only function as a subject, but not as an object. This follows on theories of control where the syntactic position of the subject is different from that of the object. Note, however, that this does not necessarily turn into an argument in favor of a hierarchical verb phrase, as the position at issue is that of the verb phrase external, canonical subject position. Nevertheless, it still needs to be ensured on a flat VP approach that only a verb phrase internal subject, but not a verb phrase internal object can move here.

[25] É. Kiss (2002: Ch. 3.4.2) discusses instrumental case marked arguments, like the ones in (i) below, arguing that grammatical functions as manifested in the form of case suffixes cannot be responsible for anaphora distribution, since—as she argues—there are examples (such as (i)) where it is the instrumental case-marked phrase that binds the accusative anaphor, whereas in general it is the accusative argument that binds the instrumental case-marked argument. However, if—as seems plausible—(i.a) is taken to have a structural description along the lines of (ii), a c-command based account of the distribution of anaphors in (i) is derived. Note that, although É. Kiss marks (i.b) as ungrammatical, it actually has a reading, where the pattern in (i.b) is well-formed: on that reading the instrumental case-marked phrase is indeed the thematic instrument argument of the verb. Such an interpretation is illustrated in (iii).

(i) a. A lányokkal felhívattam egymást.
the girls-with up-call-caus-past-1sg each other-acc
'I got the girls call each other.'

b. *A lányokat felhívattam egymással.
the girls-acc up-call-caus-past-1sg each other-with
'*I made each other call John and Mary.'

(ii) [I CAUSE [the girls-with call each other-acc]]

(iii) a. Hívasd fel őket egymással!
call-caus-imp-2sg up them each other-with
'Make them call each other!'

b. Kend meg a kenyereket egymással!
smear PV the bread-pl-acc each other-with
'Butter the slices of bread with each other!'

[26] Licensing of parasitic gaps (which is also taken to be a property of A-bar movement) is notoriously difficult to test in Hungarian, but to the extent it is testable, it appears not to be available under scrambling. If so, this would contrast Hungarian scrambling with German (and Dutch) scrambling, where parasitic gaps are apparently licensed by the scrambling movement. As for Japanese, parasitic gaps do not exist in the language (see Saito 1992).

[27] Japanese short-scrambling is often categorized as A-scrambling (see Grewendorf and Sabel 1999 for corroboration of this view), but as it is well-known, at least prima facie, its properties are mixed (also involving traits of obligatory reconstruction, a putative property of (some) A-bar movements, which is uncharacteristic of A-movements; see Ueyama 2002 and Saito 2003 for two different approaches to this mixed behavior). Therefore I refrain here from situating Hungarian scrambling within the A/A-bar dichotomy (a distinction called into question in the current minimalist framework). My claim is simply that the basic properties of Hungarian scrambling, as reviewed in this section, reveal that the reordering operation behaves on a par with Japanese short scrambling.

[28] It is not clear if a specific interpretation of indefinites should be enforced in a scrambled position (as in Dutch or German, see de Hoop 1992) (e.g., examples like *Keres egy ügyvédet Mária* 'lit. Seeks a lawyer-acc Mary-nom' appear to be degraded for some speakers if the indefinite object NP is non-specific, but judgments are murkier in other cases.) Nevertheless, options for the projection of information focus are affected by scrambling in much the same way as in Japanese (cf. Miyagawa 2004 and references therein, see also Neeleman and Reinhart 1998 for a discussion of Dutch). A sentence like (i) can answer either *What happened?* or *What did John do?* or *Who did John see?*, whereas (ii) involving the scrambled order is apparently inappropriate as an answer to the last two questions. (ii) can serve as a (non-exhaustive) answer to *Who saw the teacher?*, wheras (i) is not felicitous in the same context.

(i)	Meglátta	János	a tanárt
	Saw	John-nom	the teacher-acc
(ii)	Meglátta	a tanárt	János
	Saw	the teacher-acc	John-nom

[29] Head-finality and scrambling are claimed to be correlated not only across languages, but also within German by Haider (2005) (see also Corver and Riemsdijk 1997 for a typological investigation). Hindi, a scrambling language that in many syntactic contexts displays a VO order, is analyzed by Mahajan (1997) to involve raising of V out of its base position. The same is argued to hold of Yiddish by Haider and Rosengren (2003) (see also Vikner 2001). See Bošković (2004) for suggestive evidence that permutations in Slavic (viewed as VO) that are conventionally cited as scrambling, do not in fact involve scrambling.

Chapter 5
Adverbials, clausal domains and more

1 Introduction

1.1 Background

One aspect of clausal word order that has been long known to display a fair amount of flexibility is the positioning of adverbials, more precisely, adverbial adjuncts.[1] It is apparent that even in 'fixed word order' languages like English, many of them have a much wider distribution than arguments. In terms of structural description, the traditional assumption in transformational generative grammar has been to analyze adverbials as adjuncts. This seems to be consistent with several of their key syntactic properties, including their optionality, their iterability and their characteristic non-transparence to subextraction. At the same time, it is clear that even by broad categorizations the distribution of different major classes of adverbials observes certain restrictions (Jackendoff 1972). Essentially, two different approaches have been explored: to reduce these restrictions to semantic composition in SEM, or to derive them from the different syntactic sensitivity of the various adverbial types to different syntactic domains.

Following this latter view, viz. on the assumption that adverbials mark certain syntactic boundaries by being confined to appear at those boundaries, the position of adverbials relative to other elements in the clause has been used as an important diagnostic of clause structure (e.g., Emonds 1976). Based on a detailed investigation of word order restrictions across languages, a recent development of this general approach, pioneered by Alexiadou (1997) and Cinque (1999), contends that the syntax of adverbials is in fact much more rigid than previously hypothesized. It is claimed that word orders are normalized, i.e., when we abstract away from various displacement operations, the basic order of adverbials of different classes is more or less fixed, i.e. an adverbial A that appears higher in the hierarchy than B cannot also appear lower in the same hierarchy, i.e., we systematically have word order

restrictions of the kind in (1). In other words, at the level of basic structure, adverbials in the clause make up an invariable hierarchy. Moreover, this hierarchy appears to be stable across languages (esp. Cinque 1999).

(1) a. Howard will *probably already* have been finishing up by then.
b. *Howard will *already probably* have been finishing up by then.
(from Svenonius 2001)

One source of apparent exceptions to this rigid hierarchy, it is proposed, is the availability of displacement operations of other elements, or of clausal domains containing some of the adverbials themselves. For instance, the verb or the verbal participle may raise across adverbs to surface in different positions both across languages and within one language. The example below is from Italian (Cinque ibid.). It is showns here that the verbal participle can appear in three different positions, while the relative order of adverbials to each other must remain fixed.

(2) a. Non hanno *rimesso* di solito più tutto in ordine.
not have put usually anymore everything in order
'They haven't usually put everything in order anymore'
b. Non hanno di solito *rimesso* più tutto in ordine.
not have usually put anymore everything in order
c. Non hanno di solito più *rimesso* tutto in ordine.
not have usually anymore put everything in order

Adverbials themselves may undergo only such movement operations that are not directly related to their adverbial status, but to general (discourse-)semantic functions such as focus, topic or *wh*-operator in questions. Another source may be the ambiguity of certain adverbials, for instance between a manner adverbial and a sentence adverbial interpretation (e.g., *cleverly*), which classes of adverbials occupy distint positions in the adverbial hierarchy.

In the cartographic approach, the adverbial hierarchy is modeled in terms of a fixed and extremely articulate syntactic template ST of functional projections, each of which is dedicated to host a given class of adverbials in its specifier, and the verb(al participle) in its head position (Alexiadou 1997, and esp. Cinque 1999). The role of adjunction in this

approach is diminished, or explicitly denied (in line with Kayne's (1994) theory of phrase structure).

The major alternative that has been explored hopes to derive the ordering restrictions in the positioning of adverbials from their semantic properties, including their semantic selection properties (e.g., Ernst 2002) and their (negative or positive) polarity status (Nilsen 2003). As discussed in Chapter 1 above, to the extent word order restrictions can be reduced to properties relevant to interface components (here: SEM), the syntactic template ST serving to constrain possible orders becomes redundant. Furthermore, to the extent we find genuine flexibility in the ordering of adverbials, the motivation for the postulation of ST is weakened. This of course does not mean that such flexibility undermines the assumption of those portions of the full clausal ST that are independent of adverbial order (e.g., the portions related to the positioning of the verb, the subject and other arguments in neutral clauses). For instance, Costa (2000) and Svenonius (2001) adopt a semantically based adjunction approach, exploiting adjunction of (non-peripheral) adverbials to only two clausal domains: roughly speaking, VP and TP. On this genre of accounts, unacceptable adverb positioning with respect to core elements of the clause (such as in **John completely has read the book*; Jackendoff 1972) can be ruled out by reference to the semantic type of the clausal domains that the adverbial combines with. In this type of approach, a set of different types of semantic domains need to be distinguished in the compositon of the clause, each of which may or may not correspond to a single type of syntactic domain. For instance, Tenny (2000) identifies six semantic domains within the clause, with which different classes of adverbials can be composed. Proponents of the approach notably include Ernst (2001, 2007) and Haider (2004).[2]

1.2 Goals and outline of the chapter

This chapter is no place to critically evaluate current alternative treatments of the syntax of adverbials in full, or even to attempt a sketch to this effect (see the special issue of Lingua Vol. 114: 6 for a variety of different approaches, and Alexiadou 2004 for a brief comparison). The basic assumptions adopted in this book and the critical objectives it has set itself, as outlined in Chapter 1, lead me to investigate the following two questions. First, can the syntactic flexibility and the syntactic rigidity involved in adverbial ordering be simultaneously captured in a model that makes reference to the semantic properties of the elements involved (in this particular case, those of the various adverbial classes, as well as those of the clausal domain they semantically compose with), but does not postulate a

dedicated syntactic template to the same end? Second, if any of the apparently free word order alternations that are found turn out to be radically free (having no effect on semantic interpretation), then can these alternations be treated without positing feature-checking or a choice in the presence versus absence of some (uninterpretable) formal feature? If so, what are these free alternations reducible to in a minimalist model that incorporates generalized Last Resort?

I address these questions based on data from Hungarian by investigating the flexibility involved in the pre-verbal syntactic distribution of adverbials, and the free word order alternation that apparently exists between a pre-verbal and a post-verbal positioning of some adverbial types. This is a rarely researched and poorly understood aspect of Hungarian syntax, and this chapter undertakes the modest task of presenting an outline of a possible account. In Section 2 I review and briefly comment É. Kiss's (2010) recent proposal to treat the apparently free alternation between a pre-verbal and a post-verbal positioning of certain classes of adverbials as well as their free permutation within the post-verbal field in terms of linearization rules. In Section 3, three major classes of adverbials are isolated, whose complex and partly flexible pre-verbal distribution is reduced to several syntax–SEM interface configurations involving different adverbial classes and semantic types characterizing distinct clausal domains. Two of these semantic types of clausal domains turn out to be relevant also to focus movement, while the third plays a role in syntactic topicalization. The free alternation between pre- and post-verbal positions of adverbials, on the other hand, is approached in Section 4 in terms of syntactic movement, triggered by SEM interpretability needs, rather than by feature checking. I discuss the distribution of the applicability of the individual movement types within the clause, as well as the nature of the relation of the operations themselves in the broader context of the overall model. The account is also extended to radically free scrambling, discussed in the previous chapter, with the result that a proper trigger can be identified for this movement type as well. Section 5 adds some further remarks on the structural analysis of verbal modifiers, and concludes with a summary.[3]

2 A linearization based account

2.1 The structure below the surface position of the verb

It is by now a widely accepted view in the transformational generative literature that Hungarian has an articulated and hierarchical preverbal field, in which different operator elements with a logical or discourse-semantic function (including topics, increasing distributive quantifier phrases, negation and identificational focus) occupy predetermined positions (see particularly the works by É. Kiss, Horváth, Hunyadi, Kenesei, Marácz and Szabolcsi from the 1980s). This field is often described as the "discourse configurational" part of the Hungarian clause due to the discourse roles of topics and focussed constituents manifested here: it has a hierarchical ("configurational") structure, comprised by positions determined by topic and focus roles, and by the scope interpretation of quantifiers appearing here.[4] According to an empirical generalization of the line of generative work cited above, the structure of the pre-verbal field is strictly hierarchical, and there is an isomorphy between the surface structure hierarchical relations of preverbal elements and the hierarchical relations in semantic composition in SEM. This is most apparent in the domain of quantifier scope, with different pre-verbal permutations of distinct increasing distributive quantifier phrases (Quantifiers, for short) corresponding to distinct scope interpretations holding between them. Preverbal free word order is therefore only illusory: it is not genuinely free, as each permutation is associated with a different meaning.

At the same time, there is no consensus in the transformational generative literature regarding the structural analysis of the postverbal section of the Hungarian clause. The debate on this matter in the 1980s and the 1990s (see especially the works by Bródy, É. Kiss, Horváth, Kenesei, Marácz) ended without a conclusive result, nonetheless, it is É. Kiss' (1987a, 1991, 1994a, 2002, 2003) non-configurational analysis that emerged as the most elaborate and empirically best-supported account, which has had the greatest impact on generative research on the structure of the Hungarian clause. On this approach, Hungarian Verb Phrases are flat, i.e., non-configurational, with adjuncts and complements appearing in any order. Flat structure is also held responsible for the lack of subject–object asymmetries – including the subject-object symmetry regarding Principle C of the Binding Theory (Chomsky 1981, 1995) – and the identical scope interpretation options available to postverbal quantifiers.[5] For further details, and a thorough critical discussion, see Chapter 4.

In Chapter 4 I presented an alternative approach in terms of a hierarchical *v*P, maintaining that the Hungarian clause is configurational not only in its pre-verbal domain,

but all the way down. I proposed a radically free scrambling movement account, on which permutations of nominal arguments differing from the linear order determined by the basic hierarchy are caused by movements. In particular, scrambling may optionally move a lower argument above a higher one, resulting in different permutations.[6]

As far as the scope interpretations of postverbal quantifier expressions are concerned, I argued in Chapter 2 for an approach based on Quantifier Raising (see also Surányi 2003, 2004a,b), which (optionally either overtly or covertly) raises the Quantifier into its scope position via an adjunction structure. In Chapter 3, I argued that Quantifier Raising may have the spell out pattern of an overt movement in two cases: if the Quantifier is a focus, or if is interpreted as a topic. I gave these deviations from covert QR a prosodically based account.

On the basis of morphosyntacitc (or, lexical) data, É. Kiss (2008c) also adopts a hierarchical *v*P structure. É. Kiss (2008a, 2007a), drawing on Chomsky's (2001, 2005) phase-based minimalist approach, partly revises and partly redefines the previous model relying on a non-configurational (or flat) VP. In the novel approach, the structure of the *v*P is initially hierarchical in Hungarian too (which causes the asymmetries in anaphora binding), but it becomes flat in the course of the syntactic derivation, and this is how it is interpreted by the interface components (excluding A-binding relations). This means that after becoming flat, the projection which is the complement of the functional head hosting the verb is seen by the external interface components as having a flat structure. At the syntax-semantics interface this affects, for instance, the application of Principle C and scope interpretation mechanisms; while at the syntax–PHON interface flat structure results in free linearization. For the full details of the account, see É. Kiss (2008a, 2007a).

The essential difference between theories on Hungarian postverbal "free" word order based on "flattening" (É. Kiss 2008a, 2007a) and those based on Scrambling movements (Surányi 2006a, b) should be clear: while the former assumes that the syntactic structure is non-configurational (non-hierarchical) at Spell-Out, the latter postulates an apparently optional movement.

2.2 Quantifier expressions and adverbials

É. Kiss (2008b, 2009b) extends her analysis based on "flattening" towards adverbials and quantifier expressions. Her three crucial assumptions are the following:

(3) a. Quantifier expressions (via obligatory overt Quantifier Raising) and adverbials

occupy their scope positions in surface structure.

b. Quantifier expressions and adverbials can be adjoined to any of the functional projections constituting the predicate of the clause via left- or right-adjunction.

c. As a special property of the syntax–PHON mapping in the Hungarian clause, the linearization of the major constituents to the right of the verb is free.

These proposals capture the parallelisms in the word order of quantifier expressions and adverbials in (4a) and (4b), which are illustrated by (5) and (6) respectively. Each example is followed by the schematic representation of its relevant interpretation. In (6), the first line presents the actual word order, the fourth one a (surface) syntactic structure associated with it, and the fifth one provides its interpretational schema. The ’ symbol marks pitch accents.

(4) a. The surface order of preverbal quantifier expressions and adverbials matches the hierarchy of their interpretation.

b. There is no connection between the surface order of postverbal quantifier expressions and adverbials and the hierarchical position of their interpretation.

(5) a. A tanár [’gyakran [’hangosan [fel olvasta a dolgozatokat]]]
the teacher often aloud VM read the papers-ACC
‘The teacher often read the papers aloud.’
Interpretation: …(gyakran (hangosan (…)))

b. * A tanár [’hangosan [’gyakran [fel olvasta a dolgozatokat]]]
the teacher aloud often VM read the papers-ACC
Interpretation: *…(hangosan (gyakran (…)))[7]

c. [Kétszer is [minden gyereket [AZ OSZTÁLYFŐNÖK látogatott meg]]]
twice also every child-ACC the form.master visited VM
‘It is the form master who visited every child twice.’
Interpretation: (kétszer is (minden gyereket (...)))

d. [Minden gyereket [kétszer is [AZ OSZTÁLYFŐNÖK látogatott meg]]]
every child-ACC twice also the form.master visited VM
‘It is the form master who visited every child twice.’
Interpretation: (minden gyereket (kétszer is (…)))

(6) a. A tanár fel olvasta ’gyakran ’hangosan a dolgozatokat
the teacher VM read often aloud the papers-ACC
‘The teacher often read the papers aloud.’
A tanár [[[fel olvasta a dolgozatokat] ’hangosan] ’gyakran]
Interpretation: …(gyakran (hangosan (…)))

b. AZ OSZTÁLYFŐNÖK látogatott meg minden gyereket kétszer is
the form.master visited VM every child-ACC twice also
‘It is the form master who visited every child twice.’
[[[AZ OSZTÁLYFŐNÖK [látogatott meg]] kétszer is] minden gyereket]
Interpretation: (minden gyereket (kétszer is (AZ OSZTÁLYFŐNÖK (…))))

In accordance with (4a), the surface structure in (5) is isomorphic with the semantic composition. In (6a), both adverbials are right-adjoined to the appropriate functional projection (therefore, the structure of (6a) and that of (5a) are identical save for the direction of adjunction), and the associated interpretational schema is isomorphic with this construction. Due to the assumption of free postverbal linearization (see (3c)), any word order could be associated with such a structure where both adverbials follow the verb. The structure and interpretation of (6b) correspond to that of (5d), again save for the direction of the adjunction of the raised quantifier expressions, i.e., the choice of linearizing the adjuncts to the left (“left-adjunction”) or to the right (“right-adjunction”). According to (3c), the linearization of right-adjoined quantifiers is free.

It is important to note that É. Kiss’ (2008b, 2009b) analysis of the syntax of Hungarian quantifier expressions and adverbials, as outlined here, is logically independent of her account of the portion of the Hungarian postverbal field that is hierarchically “below” the surface position of the verb (É. Kiss 2008a, 2007a) (hence it is compatible with the alternative approach in Surányi 2006a, b). Nonetheless, both analyses put forward that the linearization of a given section of Hungarian clauses is free (in one of the two cases, this is derived from the assumption of a flattened structure).

The two proposals together provide a model that is capable of describing a fairly complex pattern of the relevant facts relying on relatively few special assumptions. The assumptions used, however, raise several issues that potentially have their far-reaching consequences. Putting any empirical questions aside, I will mention only a few of the conceptual issues here. First, one is left ondering whether it would be possible to go beyond the statement in (3c) and deduce it from independent factors? Second, it seems to weaken the

empirical basis of the proposal of a "flattened" structure below the actual surface position of the verb that – according to (3c) – postverbal word order is free independently of "flattening"? Third, it would lead to a more constrained theory if linearization of adjuncts was restricted to the left. It would be desirable, given minimalist guidelines, to assume that PHON exploits the asymmetry involved in the adjunction structure between the adjunct and its host for the purposes of linearization in the syntax–PHON mapping. Indeed, Costa (1997, 1998) argues on empirical grounds that adjunction of adverbials to functional categories is universally linearized as adjunct > host of adjunction. Finally, it seems empirically problematic to maintain that 'flattening' takes place following head movement in all constructions across languages. The question is begged what parameter dictates that verb movement should result in 'flattening' in the Hungarian clause. It is clear that these are all intriguing questions, and although it is not detrimental to the account that they have not yet been resolved, it certainly leaves room for an alternative. Indeed, this is what the rest of the chapter seeks to develop.

3. Major classes of adverbials in the Hungarian clause

I hasten to note that it is not my aim to provide an exhaustive, even if rough, syntactic analysis of Hungarian adverbials; this is beyond the scope of the present chapter. My ambition is more modest: it is to investigate the flexibility involved in the pre-verbal distribution of adverbials, and the free word order alternation that apparently exists between a pre-verbal and a post-verbal positioning of some adverbial types. I do this with an eye to the theoretical issues raised in the context of the minimalist program in Section 1 above.

As a first step, I examine the distribution of preverbal adverbials compared to other preverbal elements and I will use the findings for the postverbal field (3.1). Second, I investigate – within the postverbal field – the behaviour of the adverbials that are at the lower end of the hierarchy (3.2). Finally, I put forward my syntactic analysis of adverbials that appear in the postverbal field while being interpreted as "higher" than at least one elements in the preverbal domain.

My account also adopts the structural analysis of optional adverbials as being merged in an adjunction configuration (e.g., Chomsky 1986; *contra* the specifier analysis of Alexiadou, Cinque, Laenzlinger and others; see Section 1.1 above, as well as Chapter 1).

3.1 Major adverbial classes in the preverbal field

The representation in (7) provides the structure of the preverbal field (see Section 1). Apart from the verb, none of the elements is obligatory; negation is omitted here; the asterisk (*) marks iterable elements; the Quantifier position can freely host phrases with the additive particle *is* 'also' and monotone increasing distributive universal quantifiers. I will refer to the embedded clausal constituents in (7a) as "TopP," "DistP" and "FocP," while the innermost constituent of (7b) will be dubbed "AspP," following a mainstream labelling convention. Importantly, these names are merely descriptive labels used for the convenience of the reader familiar with mainstream generative descriptions of Hungarian clause structure. Their use in no way implies that I subscribe to the cartographic analysis of these clausal domains, including the categorial nature and the existence of the functional projections that these labels correspond to in cartographic accounts. As the reader will recall, quantifier expressions are analyzed as adjoined constituents in Chapter 2, and preverbal focus is argued in Chapter 3 not to occupy a special functional position dedicated to it. The higher two positions (or rather, fields) in (7) will be dubbed Topic and Quantifier (fields) in what follows, respectively. The [Focus + Verb …] complex will be referred to as "Focal Predicate" and the [(Verb Modifier) + Verb …] complex will be referred to as "Neutral Predicate."

(7) a. [Topic* [Quantifier* [Focus Verb ...]]]
b. [Topic* [Quantifier* [(Verb Modifier) Verb ...]]]

It is important to note that, for ease of presentation, for now I will adopt the common view that Focus is hierarchically higher up in the structure than the (neutral) position of Verb Modifier, even though only one of them can linearly precede the verb (see É. Kiss 1998b, Puskas 2000, Surányi 2003). On this point I diverge from the analysis in Chapter 3, where Focus occupies the same position as the Verb Modifier appears in in a neutral clause (viz., specifier of TP). I will return in Section 5 to how this latter structural analysis can be reconciled with the results achieved in the present chapter.

To date, no sufficiently elaborate generative syntactic account of the syntax of adverbials has been offered (e.g., É. Kiss (2002: Chapter 2) differentiates between two broad classes of adverbials from a syntactic point of view: that of sentence-adverbials and that of

predicate-adverbials). I begin my analysis with the formulation of some empirical generalizations.

Certain adverbials may appear in the preverbal section of the hierarchy presented in (7), above the topic (8a). In some cases, such adverbials are topics (for example, frame or scene setting adverbials, as the locative at the beginning of (8a)); due to the discourse role of topics, these are interpreted as specific (referential). Topic adverbials may be generated in topic positions (as in (8a)); however, some adverbials may end up in topic positions via syntactic topicalization (as in (8b), where the locative is the argument of the verb). Naturally, adverbials may undergo focalization or overt Quantifier Raising, if they fit the general requirements of these operations (see, for example, É. Kiss 2002). I put these cases aside here, as they are not directly relevant to my present concerns.

(8) a. Magyarországon a tokaji aszú világhírűnek számít
Hungary-SUP the Tokaj-ADJaszú world.famous-DAT count
'Tokay is considered world-famous in Hungary.'

b. Magyarországon tízmillió ember lakik.
Hungary-SUP ten.million people live
'Ten million people live in Hungary.'

Other adverbials preceding nominal Topics cannot be regarded as topics from the point of view of information structure, as they do not have "reference," and cannot be interpreted as being of an individual / entity type. Such adverbials are illustrated below:

(9) a. Szerencsére Jánost meghívták az ünnepségre.
Fortunately John-ACC VM.invite-PAST-3RD-PL the ceremony-SUBL
'Fortunately John was invited to the ceremony.'

b. Állítólag Jánost meghívták az ünnepségre.
Allegedly John-ACC VM.invite-PAST-3RD-PL the ceremony-SUBL
'Allegedly, John was invited to the ceremony.'

d. Valószínűleg Jánost meghívták az ünnepségre.
Probably John-ACC VM.invite-PAST-3RD-PL the ceremony-SUBL
'Fortunately John was invited to the ceremony.'

Based on the schema presented in (7), the following generalizations can be made regarding the adverbials appearing above a Topic, illustrated in (11). It should be noted that out of context the acceptability of the clauses decreases (to various degrees) for some informants in case these adverbials appear below (at least one) Quantifier; degradation is mostly in the mild to medium range. Acceptability increases even for these informants, if an appropriate context is given.

(10) If an adverbial can appear in the field above Topics, then
  a. it can also appear between the Topic field and the Quantifier field (11f)
  b. it can also appear within the Quantifier field (11a, i)
  c. it can appear between the Quantifier field and the Focal Predicate (11c,h)
  d. it can appear between the Quantifier field and the Neutral Predicate (11b,d,e,g)

(11) a. Jánost mindenki szerintem mindenhova meghívja (*speech act*)
  John-ACC everyone according.to.me everywhere invites
  'In my opinion, everyone invites John everywhere.'
  b. Jánost mindegyik ünnepségre szerencsére meghívták (*evaluative*)
  John-ACC every ceremony-SUBL fortunately VM.invite-PAST-3RD-PL
  'Fortunately, John was invited to every ceremony.'
  c. Jánost minden ünnepségre állítólag TE hívtad meg (*evidential*)
  John-ACC every ceremony-SUBL allegedly you called VM
  'Allegedly, it was you who invited John to every ceremony.'
  d. Jánost minden ünnepségre valószínűleg meghívták (*epistemic*)
  John-ACC every ceremony-SUBL probably VM.invite-PAST-3RD-PL
  'John was probably invited to every ceremony.'
  e. Jánost minden főnöke akkoriban ki akarta rúgni (*past tense*)
  John-ACC every boss-POSS then VM wanted sack-INF
  'At that time, every boss of John wanted to sack him.'
  f. Jánost talán mindenhova meghívják (*irrealis*)
  John-ACC perhaps everywhere VM.call-PRES-3RD-PL
  'Perhaps John is invited everywhere.'
  g. Mindenkit szükségszerűen le fognak egyszer váltani (*necessity*)
  Everyone-ACC necessarily VM will-3RD-PL once replace-INF
  'It is necessary that everyone will once be replaces.'

h. Ketten is esetleg JÁNOST tartanák alkalmasnak (*possibility*)
two also perhaps John-ACC consider-COND-3RD-PL suitable-DAT
'Perhaps even two people consider John suitable.'

i. Jánost is általában mindenki meghívja (*habitual*)
John-ACC also usually every VM.calls
'Usually everyone calls even John.'

This "High Adverbials" – i.e., the type in (11) – correspond to the highest adverbials in Cinque's (1999) hierarchy of adverbials (see Cinque (ibid: 106); the labels of the classes in parentheses in (11) match Cinque's own labels).[8]

In Cinque's hierarchy, the subsequent classes of adverbials may not appear above (non-contrastive) topics; yet they can appear between the Topic field and the Quantifier field:

(12) a. Jánost feltétlenül én is meghívom (*modal*)
John-ACC certainly I also VM.invite-1ST-SG
'Certainly, I will also invite John.'

b. Jánost megint mindenki meghívta (*repetitive*)
John-ACC again everyone VM.invited-3RD-SG
'John was again invited by everyone.'

c. Jánost gyakran mindenki meghívja (*frequency*)
John-ACC often everyone VM.invites
'John is often invited by everyone.'

d. János szándékosan minden ünnepségre elmegy (*volition*)
John deliberately every ceremony goes
'John deliberately goes to every ceremony.'

e. János gyorsan mindenkit megnyugtatott (*celerative I.*)
John quickly everyone-ACC VM.reassured-3RD-SG
'John quickly reassured everyone.'

f. Jánost már minden ünnepségre meghívták (*anterior*)[9]
John-ACC already every ceremony-SUBL VM.invited-3RD-PL
'John has already been invited to every ceremony.'

g. Jánost még mindig mindenhova meghívják (*continuative*)
John-ACC still always everywhere VM.invite-PRES-3RD-PL
'It is still true that John is always invited everywhere.'

I will refer to these as “Middle Adverbials”. Concerning these, the following generalizations can be made, exemplified below in (14a), (14b) and (14c), respectively:

(13) If an adverbial can appear between the Topic field and the Quantifier field, then
  a. it may appear in the Quantifiers field (between two quantifier expressions).
  b. it may appear between the Quantifier and the Focal Predicate.
  c. it may appear between the Quantifier and the Neutral Predicate.

(14) a. Jánost én is feltétlenül mindenhova meghívom
  John-ACC I also certainly everywhere invite-pres-1ST-SG
  ‘Certainly, I also invite John everywhere.’
  b. Jánost mindenki megint KÉSŐN hívta meg
  John-ACC everyone again late invited VM
  ‘Everyone called John late again.’
  c. Jánost minden ünnepségre már meghívták
  John-ACC every ceremony-SUBL already VM.invited-3RD-PL
  ‘John has already been invited to every ceremony.’

The members of a third class of adverbials – dubbed “Low Adverbials” – may appear only below the Quantifier field and above the Neutral Predicate preverbally (see (15)). These adverbials can never occur above a Focal Predicate (save for the intonational pattern typical of contrastive topics; see (16)). In other words, in the presence of Focus these adverbials may appear only below the Focus field. The members of the class of “Low Adverbials” correspond to those in the lowest segment of Cinque’s hierarchy.

(15) a. Jánosnak mindenki röviden elmondta a baját (*durative*)
  John-DAT everyone briefly VM.told the problem-POSS-ACC
  ‘Everyone briefly told his problem to John.’
  b. Mindenki teljesen átírta a fejezetét (*degree*)
  everyone completely VM.rewrote the chapter-POSS-ACC
  ‘Everyone completely rewrote his chapter.’
  c. János is jól megoldotta a példát (*agentive manner*)
  John also well VM.solved the exercise

‘Even John solved the exercise well.’

d. János is (túl) korán hazament (*celerative II.*)
John also (too) early home.went
‘Even John went home (too) early.’

(16) a. *Mindenki teljesen MÁS FEJEZETÉT írta át
everyone completely other chapter-POSS-ACC rewrote VM

b. *Minden példát jól JÁNOS oldott meg
every exercise well John solved VM

A question is whether the members of the High and Middle adverbial classes can also appear below Focus if there is a Focal Predicate in the clause (it has been shown that they can appear above the Focal Predicate). The following judgments specifically refer to the readings with these adverbials interpreted *below* Focus:

(17) Middle Adverbials below Focus:

a. KÉT EMBERT hívtam szándékosan félre
two people-ACC called-1ST-SG deliberately VM
‘I called two people aside.’

b. HETVEN POLITIKUST választottak megint be az Országházba
seventy politician-ACC elected-3RD-PL again VM the Parliament-ILL
‘Seventy politicians have been reelected as Members of Parliament.’

c. Csak KÉT helyre hívták már meg
only two place-SUBL invited-3RD-PL alreadyVM
‘He was invited only to two places.’

(18) High Adverbials below Focus:

a. *JÁNOS megy el szerencsére máshova
John goes VM fortunately somehwere.else

b. *HETVEN POLITIKUST választanak be talán az Országházba
seventy politician-ACC elect-3RD-PL VM perhaps the Parliament-SUBL

Three additional remarks should be made. First, certain adverbials are inherently focused (see Surányi 2003, É. Kiss 2002; for example, *pont most* ‘right now’), and their

position is determined by their focussed status.[10] Second, not every type of adverbials in Cinque's hierarchy has a Hungarian equivalent. Third, certain adverbials in Hungarian behave differently from their presumptive counterparts in Cinque's system. For instance, *hamarosan* 'soon' belongs to High Adverbials in Hungarian, whereas its English counterpart *soon* is the member of the Low class of adverbials. Celerative adverbials can appear in two places in Cinque's hierarchy, and so can *gyorsan* 'fast' in Hungarian (see (12e) and (15d)); nonetheless, *korán* 'early' is unambiguously Celerative II-type only. As far as the generalization in (13) is concerned, *gyorsan* can be classified as a Middle Adverbial: [11]

(19) a. Mikor bemondta a tévé a hírt, gyorsan mindenki bement a
when VM.said the telly the news-ACC fast everyone VM.went the
munkahelyére
workplace-subl
'When the news was on tv, everyone quickly went to their workplaces.'

b. Gyorsan JÁNOST küldtük be a tanárt helyettesíteni
fast John-ACC sent-1-SG VM the teacher-ACC substitute-INF
'It was John who we quickly sent in to substitute the teacher.'

c. Mindenki gyorsan megfésülködött
everyone fast VM.combed
'Everyone combed their hair quickly.'

d. Mindenki gyorsan mindenkinek bemutatkozott
everyone fast everyone-DAT VM.introduced
'Everyone quickly introduced themselves to each other.'

e. *Gyorsan János megfésülködött
fast John VM.combed
'John combed his hair quickly.'

Majdnem 'almost' also belongs to Middle Adverbials, although it is a member of the Low class of adverbials in Cinque's hierarchy:

(20) a. Majdnem minden tanársegédet ki kellett rúgni,
almost every lecturer-ACC VM needed sack-INF
de aztán valahonnan szerzett pénzt az egyetem
but then somehow got money-ACC the university

'Almost every lecturer had to be sacked, but then the university got money somehow.'

b. Majdnem JÁNOSNAK kellett előadni a végén
almost John-DAT needed present-INF the end-POSS-SUP
'It was almost John who had to present in the end.'

c. Majdnem megtartottam helyette az órát,
almost VM.gave-1ST-SG instead.of.him the lesson-ACC
de aztán nem mentem be a végén
but then not went VM the end-POSS-SUP
'I almost gave the lesson instead of him, but then I did not go in in the end.'

d. Majdnem megtartottam helyette az egész órát,
almost VM.gave-1ST-SG instead.of.him the whole lesson-ACC
de aztán hamarabb abbahagytam
but then earlier finished-1ST-SG
'I almost gave the lesson instead of him, but then I finished earlier.'

e. *Majdnem Jánost kirúgták
almost John-ACC sacked-3RD-PL
'John almost got sacked.'

On the basis of the foregoing, the following empirical generalization can be made with respect to the hierarchical distribution of adverbials appearing preverbally:

(21) If a given Adverbial A can appear in a given position P of the preverbal field of the Hungarian clause, then A can appear in any position of the preverbal field that is hierarchically lower than P.

The generalization in (21) is simple, hence it seems attractive. However, it does not cover all of the data discussed so far due to the linear perspective. First, as the Verb moves above the Verb Modifier in the presence of Focus, and thus the Verb linearly precedes the Verb Modifier, the above generalization does not cover the fact that a Middle Adverbial may occur below Focus. Second, High Adverbials appeart to be an exception to (21), as they cannot appear below Focus. The table below therefore, although it might not be as elegant as the generalization in (21), it is precise in covering all the data discussed above. In the rest of this section, I seek to provide a model for the generalizations summed up here:

		[TopP Topic		[TopP Topic		[DistP Quantifier		[DistP Quantifier		[FocP Focus		[AspP Verb Modifier…]]]]
HA	x		x		x		x		x			
MA					x		x		x		x	
LA											x	

Table 1. The preverbal distribution of the three main classes of adverbials

Before turning to develop an explanation, another generalization is to be noted. As the above classes of adverbials practically span across the whole of Cinque's articulated hierarchy, (22) also seems to hold:[12]

(22) In Hungarian, there is no adverbial that may appear only postverbally.
= Every adverbial that can appear postverbally can also appear preverbally.

It is somewhat surprising that (22) is true even in the case of the adverbials that are responsible for modifications internal to the event structure, such as *majdnem* 'almost' or *újra* 'again.' For example, *újra* is able to modify exclusively the result state component of an accomplishment event, and it can nevertheless occur preverbally.

(23) Újra kinyitotta az ablakot
again opened-3RD-SG the window-ACC
'(S)he reopened the window.'

This fact seems to be unexpected by those approaches that consider the Verb Modifier to be placed outside the VP in a neutral clause (assuming that *újra* is always in its "scope" position (von Stechow 1996)). A possible explanation of (22) falls outside the scope of this chapter, and will be set aside. Surányi (2009a) presents an analysis of Verb Modifiers on the basis of which (22) can be predicted.

3.2 A mini-calculus of clausal domain types

Returning now to Table 1, assuming that different adverbials, as a function of their own meaning, are able to modify constitutents of different semantic types (see Haider 2000, Ernst 2002, Frey 2003, a.o.), the distribution presented in Table 1 suggests that either each of the

three major classes of adverbials in the Hungarian clause is able to modify more than one semantic type of constituents, or else it does not hold that the different syntactic domains (recursively embedded constituents) of the clause (cf. (7)) correspond to distinct semantic types. If it is accepted that the semantic selectional properties of different classes of adverbials are invariant, this would speak in favor of the second solution; however, the "cost" of this approach is that, in turn, the semantic type of clausal constituents embedded in each other could no longer be taken as being invariant. Certainly, one cannot *a priori* choose between this view and its opposite (i.e., on which the type, or semantic selectional property, of adverbials is flexible, whereas the semantic type of clausal constituents is constant); the choice needs to be informed by empirical arguments.

For instance, coordination phenomena may provide an argument in favour of the variability of the semantic type of clausal constituents:

(24) a. Tudom, hogy [mindenki hazament] és [ketten ott maradtak]
I.know that everyone home.went and two there stayed
'I know that everyone went home and two people stayed there.'

b. Azt mondtad, hogy [mindenki hazament] és [csak te maradtál ott]
that you.said that everyone home.went and only you stayed there
'You said that everyone went home and only you stayed there.'

c. Úgy tudom, hogy [János kezdte el] és [Péter csak befejezte]
so I.know that John started VM and Peter only finished
'As I know, John started it and Peter just finished it.'

d. Úgy láttam, hogy [bejött valaki] és [ketten felálltak]
so I.saw that VM.came someone and two stood.up
'I saw as if someone came in and two people stood up.'

(24a) exemplifies the coordination of a DistP and a TopP, (24b) that of a DistP and a FocP, (24c) that of a FocP and a TopP and (24d) that of an AspP and a TopP. These categories are all each other's alternatives as clausal arguments of a verb (or a complementizer below the verb). Coordination and selectional restrictions show that these clausal categories can be equivalent in terms of semantic types. I will model this type variability with type raising; for example, a "DistP" behaves in the coordination shown in (24a) as being of a "higher" type, viz. a "TopP".

Let us consider the details of the proposal. Frey (2003) and (Ernst (2002) use partly overlapping inventories of semantic types to describe different parts of the clausal hierarchy; for instance, the hierarchy of types according to Ernst's so-called FEO calculus (Fact-Event Object calculus) is comprised by the following semantic types: fact > proposition > event > specified event. These inventories could be adapted and, if necessary, adapted so as to be applicable to the part of Hungarian clausal hierarchy discussed so far. Nevertheless, as specific semantic types need not be defined precisely to analyze the data presented above, for now I will neutrally designate the types of Hungarian clausal constituents embedded in each other with numerical labels, as shown below:

(25) [**3** Topic [**3** Topic [**3** Quantifier [**3** [**2** Quantifier [**2** Quantifier [**2** Focus [**2** [**1** Verb Modifier...]]]]]]]]]

Let us consider the Verb Modifier-initial Predicate (VM-Predicate, for short) Type 1. At first, we might be tempted to think that Focus raises this type to Type 2. However, this is contradicted by the grammaticality of clauses containing (real) multiple foci (see É. Kiss 1998c, 2002, Surányi 1999, 2003). If a Focus did raise the type of a clausal constituent from Type 1 to Type 2, then *the same* type raising potential could no longer be associated with a higher focus. At the same time, it appears that a Focal Predicate is higher than a VM-Predicate, since Low Adverbials may modify only the latter, and not the former. Both of these conditions can be taken into consideration if it is assumed that a Predicate with a Verb Modifier may be raised to Type 2 without adding Focus to the construction, although Type 2 is naturally the type of a Focal Predicate. It must be kept in mind that an adverbial capable of modifying a clausal constituent higher than a Predicate with a Verb Modifier can also modify a Predicate with a Verb Modifier. This means that the type of a Predicate with a Verb Modifier can be raised to higher types without adding a Quantifier or a Topic to the construction; let's call this *type conversion*, indicated as n←m.[13] Based on the data presented above, type conversion can only raise the type of a clausal constituent (e.g., a Focal Predicate may behave as a DistP with regard to modifiability), but it cannot lower that (i.e., a Focal Predicate may never behave as a Predicate with a Verb Modifier with respect to modifiability). As in view of the facts reviewed above 2←1 conversion as well as 3←2 conversion must exist, there is no need to assume an independent 3←1 conversion.

Therefore, the basic type of a Focal Predicate is Type 2. Since Focus is a recursive constituent (as has already been mentioned, Hungarian does indeed have real multiple foci; see also Chapter 3), one Focus constituent does not raise the type of the clause (i.e., it is 2←2). Similarly, the semantic type of a Type 2 constituent does not change either if a Quantifier is added to the construction: a Quantifier can make a Type 2 constituent out of another Type 2 constituent (i.e., it is also 2←2; otherwise the type raising potential of quantifiers could not be considered as identical, and it could hardly be explained why every adverbial appearing just below a Quantifier can also appear just above it). At this point, the question arises as to how it is possible that Foci and Quantifiers are both 2←2. As a matter of fact, the mini-calculus just presented above is not expected to reflect and capture *every* semantic difference between preverbal elements, only those that the selectional properties – and thus the distribution – of adverbials are sensitive to. Since every adverbial appearing just above Focus may also appear just above a Quantifier, and Middle Adverbials may appear both just above and just below Focus, it is necessary from the perspective of the calculus of adverbials that the constituent that FocP dominates (=AspP), the Focal Predicate (FocP), and the DistP constituent of the clause all be of the same type. This falls into place in the context of the results of Chapter 3, where it was argued that id-focus (=Focus) creates an identificational predication structure, thereby giving rise to a new proposition. It was argued further that both id-focus and Quantifier raise out of and adjoin to full propositional units (complete with a time variable in the verbal predicate). This type of unit is labelled as Type 2 in the mini-calculus above.

Thus far we have been looking at what goes on inside the logical predicate, or comment. At a certain point the border of this domain is reached (in (25) this happesn after merging in not one but two Quantifiers). This is the stage where 3←2 conversion happens, which closes off, and thus produces, the logical predicate by raising the type of the clausal domain to 3. Recursive topics do not raise the type of the domain they attacht to (i.e., they are 3←3). As for the Quantifiers appearing above High Adverbials (see (11)), I suggested in Chapter 2 that they are part of the logical subject (i.e., they are Topics) instead of the logical predicate (see, for example, Surányi 2003; a Quantifier in Topic position may precede another, nominal phrase Topic as well). A Quantifier at the beginning of the predicate may function as a short answer to a yes/no question. The Quantifier in (26a) can be found below a High Adverbial, the one in (26b) is below a Middle Adverbial, while the one in (26c) is above a Middle Adverbial. However, the Quantifier above a High Adverbial cannot function

as an answer to a yes/no question (in cases when it is able to appear in a yes/no question), as can be seen in (27):

(26) a. A: Általában mindenki eljön? B: Mindenki.
usually everyone comes everyone
'Does everyone usually come?' 'Yes.'

b. A: Még mindenki itt van? B: Mindenki.
still everyone here is everyone
'Is everyone still here?' 'Yes.'

c. A: Mindenki megint eljött? B: Mindenki.
everyone again came everyone
'Has everyone come again?' 'Yes.'

(27) a. A: Mindenki általában későn érkezik? B1: *Mindenki. B2: Későn.
everyone usually late arrives everyone late
'Does everyone usually arrive late?' 'Yes.'

b. A: Mindenkit szerinted mindenhova meghívnak?
Everyone-ACC according.to.you everywhere VM.invite-3RD-PL
'Do you think that everyone is invited everywhere?'
B1: *Mindenkit.
everyone-ACC
B2: Mindenhova.
everywhere
'Yes.'

These Quantifiers will behave as Topics from the perspective of our mini-calculus as well (3←3).

Even though the calculus outlined above is likely to be overly simplistic, it is sufficient for our present objectives.[14] In terms of this calculus, the basic distribution of the three main classes of adverbials in Hungarian is determined by the types of clausal domains selected by these classes, as specified in (28) below. (28) can be readily verified on the basis of Table 1 and the schema presented in (25). (29) shows the distributions outlined in Table 1 integrated into the schema displayed in (25).

(28) The types selected by Hungarian Classes of Adverbials:

a. Low Adverbials (LA): **1**

b. Middle Adverbials (MA): **2**

c. High Adverbials (HA): **3**

(29) a. **HA** [**3** Topic **HA** [**3** Topic **HA** [**3** Quantifier **HA** [**3** [**2** Quantifier …]]]]]

b. …[**3 MA** [**2** Quantifier **MA** [**2** Quantifier **MA** [**2** Focus **MA** [**2** [**1** Verb Modifier…]]]]]]

c. …[**3** [**2** Quantifier [**2** Quantifier [**2** Focus [**2 LA** [**1** Verb Modifier…]]]]]]

The type raising potential of certain adverbials is not included in this calculus. Even though adverbials – being adjuncts – do not typically raise the syntactic type of the modified constituent, as it was emphasized in the Introduction to this chapter, the hierarchical order of adverbials within any one of the main classes of adverbials is far from being free. According to Cinque (1999), each class of adverbials categorized here in terms of three major types constitutes a class of its own, and their hierarchy results in a complete linear ordering within the structure of the clause (e.g., the internal order of the examples in (11), (12) and (15) all follow Cinque's hierarchy).

Nevertheless, there exist pairs of adverbials in Hungarian which can appear preverbally in either order. (30) illustrates this fact with Middle Adverbials, while (31) does so with High Adverbials. (32a) and (32b) present two permutations of a High and a Middle Adverbial, respectively. In each pair, the first version conforms to the canonical hierarchy.

(30) a. Feltétlenül megint el akar jönni / Megint feltétlenül el akar jönni
definitely again VM wants come-INF again definitely VM wants come-INF
'He definitely wants to come again.'

b. Gyakran szándékosan otthon marad / Szándékosan gyakran otthon marad
often deliberately home stays deliberately often home stays
'(S)he often stays at home deliberately.'

(31) a. Szerinted állítólag otthon van / Állítólag szerinted otthon van
according.to.you allegedly home is allegedly according.to.you home is
'In your opinion, (s)he is allegedly at home.'

b. Szerencsére általában igaza van / Általában szerencsére igaza van

fortunately usually truth-POSS is usually fortunately truth-POSS is
'Fortunately, (s)he is allegedly at home.'

(32) a. Szükségszerűen gyakran/ Gyakran szükségszerűen leváltanak valakit
necessarily often often necessarily VM.replace-3-PL someone-ACC
'Necessarily, someone is often replaced.'

b. Valószínűleg már / Már valószínűleg mindenki ismeri
probably already already probably everyone knows-OBJ
'Probably everyone has already met him/her.'

Each order in the examples above is associated with a different meaning, even if this difference is not always completely clear: adverbials are interpreted in their surface position. There is no difference in (32b). Notice also that both versions in (31a) are ambiguous: if the second adverbial in either version is realized with a parenthetical prosody, "scope" relations get inverted. Parenthetical use, which is not always trivial to detect in prosody, is a regular possibility (especially in the case of High Adverbials), and an independent factor in the free order of adverbials. Adverbials of parenthetical use should be taken as a separate case both preverbally and postverbally. As for the preverbal permutability of adverbials and their restricted freedom of selectional properties in the light of (28), consult Surányi (2008: Section 6). [15]

In this section, I have examined what kind of classification of adverbials is necessary, and what kind of pattern they follow when appearing in certain positions of the preverbal field. I have argued that it is necessary to distinguish three semantic types of clausal domains, which the three major classes of adverbials select for (see (28)). Flexibility in the pre-verbal distribution of adverbials stems from two main sources. (i) Elements selecting for the same semantic type of clausal domain – including different members of the same adverbial class, as well as other elements of the clause, like Quantifer or Topics – may attach to it in a relatively free order. (ii) The type of clausal domains is partially flexible, as summed up in (29).

The remainder of the chapter investigates the post-verbal behaviour of adverbials, as well as the possible analogy with Quantifiers.

4 Revisiting the post-verbal field: The view from adverbials

4.1 The interpretation of postverbal adverbials and quantifier expressions

The first and most straightforward generalization about the postverbal field is that the order of adverbials here is fundamentally free. In a broader look at this filed, such a generalization can be made about every postverbal element (see É. Kiss 1994a, 2002):

(33) Word order in the postverbal field is free in Hungarian.

With respect to the arguments of the verb, two alternative approaches to (33) were summarized in section 1. One of them assumes the "flattening" of the construction that is below the verb already moved in the derivation of the clause; that is, the structure becomes non-configurational after the verb moves out of it (É. Kiss 2008a, 2007a). This is amended by É. Kiss' (2008b, 2009b) generalization in (3c), slightly reformulated here as (34):

(34) The linearization of the postverbal field of the Hungarian clause is free.

The model is complete with (3a) and (3b), and it works the way it was presented in section 2.

Here I will provide an alternative approach to postverbal adverbials, which does not use the generalization in (34) or any similar principle. This approach is based on the account of the permutability of arguments in the postverbal field developed in Chapter 4, according to which it is due to a scrambling movement operation, as well as on the account of post-verbal Quantifiers in terms of (covert) Quantifier Raising, the approach advocated in Chapter 2. I seek to find out whether any further principles or rules are necessary to be introduced in order to handle postverbal adverbials besides the two syntactic movements just mentioned.

I begin with empirical generalizations. There may be two other important observations to be made. The first one complements (22):

(35) Every preverbal adverbial may appear postverbally as well.

Another generalization applies to the interpretation of postverbal adverbials, and is exemplified in (37). (37a) and (37b) both contain a Low Adverbial, (37c) and (37d) a Middle Adverbial, and finally (37e) and (37f) a High Adverbial.

(36) A postverbal adverbial A may be interpreted at a point of the hierarchical clause structure where A could appear preverbally.

(37) a. Újraírta teljesen a cikket
rewrote-3RD-SG completely the article-ACC
'(S)he completely rewrote the article.'

b. Teljesen újraírta a cikket
completely rewrote-3RD-SG the article-ACC
'(S)he completely rewrote the article.'

c. Mindenkit megnyugtatott gyorsan
everony-ACC reassured-3RD-SG quickly
'(S)he quickly reassured everyone.'

d. Gyorsan mindenkit megnyugtatott
quickly everyone-ACC reassured-3RD-SG
'(S)he quickly reassured everyone.'

e. Szerinted otthon van állítólag
in.your.opinion home is allegedly
'In your opinion, (s)he is allegedly home.'

f. Állítólag szerinted otthon van
allegedly in.your.opinion home is
'In your opinion, (s)he is allegedly home.'

The existential generalization regarding synonymy in (36) could in fact be strengthened to the force of a universal. (37c) is synonymous not only with (37d) but also with (38a); also, (37e) is synonymous not only with (37f) but also with (38b). The relevant empirical generalization could in fact be formulated as can be seen in (39).

(38) a. Mindenkit gyorsan megnyugtatott
everyone-ACC quickly reassured-3RD-SG
'(S)he quickly reassured everyone.'

b. Szerinted állítólag otthon van
in.your.opinion allegedly home is
'In your opinion, (s)he is allegedly home.'

(39) A postverbal adverbial A may be interpreted at any point of the hierarchical clause structure where A could appear preverbally.

Following É. Kiss (1992, 2002), (39) could also be stated about Quantifiers (see Hunyadi's (1999, 2002) prosody-based alternative model of quantifier scope interpretation and the prosodic conditions complementing (40) below):

(40) A postverbal Quantifier Q may be interpreted at a point of the hierarchical clause structure where Q could appear preverbally.

Furthermore, (22) and (35) are true of Quantifiers as well:

(41) Every Quantifier that can appear postverbally may also appear preverbally.

(42) Every Quantifier that can appear preverbally may also appear postverbally.

These parallelisms lead to an analysis in which the generalizations about Adverbials (see (22), (35) and (39)) as well as their counterparts about Quantifiers (see (41), (42) and (40)) can be explained on the same basis. É. Kiss' (2008b, 2009b) analysis based on left- and right-adjunction summarized above is quite similar.

According to Surányi (2003, 2004a, b), (i) those preverbal Quantifiers that take their scope in a position of the preverbal field move there via Quantifier Raising, and (ii) although Quantifier Raising is prototypically a covert syntactic operation crosslinguistically, it is optionally overt or covert in Hungarian (that is, Quantifier Raising in Hungarian either affects the word order position of the Quantifier (when it is overt) or it does not (when it is covert)). This casts some light upon the behaviour of the Quantifiers that are generated within the postverbal field but are interpreted in a given position of the preverbal field (see (43b) for overt and (43a) for covert Quantifier Raising).

(43) a. Csak KÉT gyereke született mindenkinek
only two child-POSS was.born everyone-DAT
'Everyone had only two children.'

b. Mindenkinek csak KÉT gyereke született
everyone-DAT only two child-POSS was.born
'Everyone had only two children.'

Nonetheless, Quantifier Raising does not account for Quantifiers generated in the preverbal field.[16]

(44) a. Minden évben tavasszal és ősszel virágba borul a kert
every year-INE spring-INS and fall-INS flower-ILL bursts the garden
'The garden bursts into flower every spring and fall.'

b. Tavasszal és ősszel virágba borul minden évben a kert
spring-INS and fall-INS flower-ILL bursts every year-INE the garden
'The garden bursts into flower every spring and fall.'

c. A tudósok Magyarországon is megbecsülésnek örvendenek
the scientists Hungary-SUP also appreciation-DAT rejoice-3^{RD}-PL
'Scientists are honoured also in Hungary.'

d. A tudósok megbecsülésnek örvendenek Magyarországon is
the scientists appreciation-DAT rejoice-3^{RD}-PL Hungary-SUP also
'Scientists are honoured also in Hungary.'

As can be seen in (44b) and (44d), such Quantifiers generated canonically "high" may also appear postverbally. Such Quantifiers appearing postverbally may never be interpreted in their surface position, as opposed to Quantifiers that are generated postverbally and either function as arguments or as adjuncts. The latter leave a trace interpreted as a variable after they move to their preverbal scope position via Quantifier Raising; this variable is interpreted *in situ* (see, e.g., Heim and Kratzer 1998). We return to this issue of interpretation below. The case of Quantifiers canonically generated, and interpreted, in a "high" pre-verbal position while surfacing in the post-verbal field corresponds to the case of adverbials generated and interpreted in the pre-verbal domain, but appearing postverbally. The latter of the two is exemplified in (18a) and (18b), in which the only reading that the High Adverbials can be associated with is when they are interpreted above Focus:

(45) a. JÁNOS megy el szerencsére máshova
John goes VM fortunately somewhere.else
'Fortunately it is John who goes somewhere else.'

b. HETVEN POLITIKUST választanak be talán az Országházba
seventy politician-ACC elect-3RD-PL VM perhaps the Parliament-ILL
'Perhaps seventy politicians are elected to the Parliament.'

It seems that one of the crucial properties of free word order in Hungarian is that under certain circumstances a Quantifier or an Adverbial may be interpreted *wholly* in a position distinct from its surface position.

(i) In all the cases discussed thus far, the surface position is in the postverbal field, while that of semantic interpretation is in the preverbal field.

(ii) According to the established generalization in the generative literature on Hungarian, such a scenario may never occur *within* the preverbal field: the structural hierarchy of the elements projected in the preverbal field – corresponding to their linear word order – robustly corresponds to the interpretational hierarchy of these elements with respect to each other (see section 1; cf. the references in É. Kiss (2002); see also É. Kiss 2008b, 2009b). This means that a given element in the preverbal field cannot be interpreted at a hierarchical point other than its surface position.

(iii) A third case is when both the surface position and that of the interpretation is within the postverbal field. As far as Quantifiers are concerned, É. Kiss (1991, 2002) shows that a postverbal object Quantifier is capable of taking scope over a subject quantifier preceding it. If we assume the existence of a completely hierarchical structure (as in Surányi 2006a, b), this means that (covert) Quantifier Raising also works within the postverbal field (as suggested by Surányi (2003)). In fact, this is the null hypothesis: Quantifier Raising is not sensitive to the linear position of the verb; if there is an appropriate scope position (e.g., a *v*P or the edge of a second FocP etc.), then the movement of a quantifier expression via Quantifier Raising into this position has to be possible regardless of the surface position of the verb. As for adverbials, examples similar to those in (46) may help us find an explanation, in which Middle Adverbials (MA) and Low Adverbials (LA) appear together in the postverbal field, and both are interpreted within the scope of Focus. Although LA precedes MA, the hierarchy of their interpretation can only be [MA [LA ...]] (as was presented in the previous subsection).

(46) Csak az ELSŐ cikket írtam teljesen már át
only the first article-ACC rewrote-1ST-SG completely already VM
'Only the first article has already been rewritten by me.'

(iv) The reverse case of (i) is when a preverbal Quantifier or Adverbial is interpreted in a postverbal position. As far as Quantifiers are concerned, this is impossible not only in the case of those undergoing overt Quantifier Raising but also in the case of those generated "high" (see (47), compare (44)). Similarly, this is also impossible in the case of adverbials (see (47b), compare (47c)).

(47) a. Magyarországon is KÉT nagy irányzat csap össze (*Fókusz > Kvantor)
Hungary-SUP also two big stream clash VM
'Two big streams clash also in Hungary.'

b. *Már csak JÁNOS olvasta el a cikket
already only John read VM the article-ACC

c. Csak JÁNOS olvasta már el a cikket
only John read already VM the article-ACC
'The article has been read only by John.'

(48) summarizes the configurations detected so far. (48d) corresponds to postverbal Quantifier Raising. (In (48), precedence relations coincide with hierarchical relations; (X) marks the position of interpretation of adverbials and Quantifiers, while X their surface positions.)

(48) a.	OK		(X) Verb X		(i)
b.	*	X Y	(X) Verb		(ii)
c.	*	(X) Y	X Verb		(ii)
d.	OK		Verb (X) Y X		(iii)
e.	*	X	Verb (X)		(iv)

In case a Quantifier or an adverbial is not interpreted in the hierarchical position corresponding to its surface position within the postverbal field, besides the analysis shown in (48d), its reverse could also be possible in principle – this is represented by (49):

(49) ?: Verb X Y (X)

In (49), it is not the lower element that gets interpreted higher than its surface position, but the other way round: it is the higher element that is interpreted lower than its surface position. As pointed out in discussing (iii), the former must be possible in the case of Quantifiers. However, no empirical data has been found that could *rule out* the availability of (49), i.e., the possibility to interpret a Quantifier or an adverbial lower than its postverbal surface position (e.g., to "reconstruct" it into a position that it occupied at an earlier stage of the derivation). This is not possible when a Quantifier overtly moves via Quantifier Raising from its base position into its postverbal surface position; the movement of Quantifier Raising cannot be reconstructed for the purposes of semantics (as is shown by the scope interpretation of quantifier expressions moved into a preverbal surface position by Quantifier Raising). As movements universally move elements only upwards, (49) is not possible through "downward" (covert) movement ("lowering") either. Nonetheless, if a Quantifier moves into its postverbal surface position not via Quantifier Raising but via some other type of movement, and this movement – as opposed to Quantifier Raising – can be reconstructed (i.e., the moved element can be interpreted in its base position), then the configuration in (49) is possible. If the same movement could be applied in the case of adverbials, then their "scope" reconstruction would also be possible. I will return to this question later; for the time being, I will leave the question mark in front of the configuration in (49). In the next subsection, I will be seeking an explanation of the generalizations discussed so far.

4.2 Raising

In the case of Quantifiers, the patterns presented in (48) can all be explained by Quantifier Raising. For example, (48a) and (48d) include covert Quantifier Raising; (48b) and (48c) – on the basis of the consensus in the generative literature on Hungarian spelled out in (50) below – fall under the scope of a broader generalization. However, the explanation of (50) is far from being trivial; we return to this question below. As has been noted, Quantifier Raising in (49) is impossible, as a Quantifier cannot be reconstructed for scope interpretation after it has undergone Quantifier Raising.

(50) The scope relations of the operators in the preverbal field (Focus and Quantifiers) with respect to each other correspond to the hierarchical relations between the syntactic positions they occupy in overt syntax.

Since the behaviour of Quantifiers and adverbials is parallel from the perspective of (48a-e), it is reasonable to assume that the same mechanism applies in the case of adverbials behind the generalizations presented in (48a-e) as in the case of Quantifiers. (Indeed, É. Kiss' (2008b, 2009b) analysis – summarized in section 2 – is based on this assumption.) Based on this consideration, my proposal is the following: since the patterns presented in (48a-e) can be explained in terms of Quantifier Raising in the case of Quantifiers, the same type of non-correspondence phenomena involving the interpretation and the surface position of adverbials are due to syntactic movements essentially similar to Quantifier Raising. In order to flesh out this proposal, the nature of Quantifier Raising should first be examined.

Following mainstream analyses, Quantifier Raising is a syntactic tool to resolve semantic type-conflicts. A Quantifier is of type $<<e,t>,t>$, which is not the type of, e.g., objects selected by verbs; such objects are usually of type *e* (an individual; see Heim and Kratzer 1998; May 1985). However, the trace (or copy) left by Quantifier Raising is a variable of type *e*, which ultimately resolves the type-conflict. Contrary to May (ibid.), Reinhart (2006) proposes that Quantifier Raising may only serve the realization of broad, non-surface scope (or inverse scope), and it cannot be used for an interpretation that corresponds to the surface position of a Quantifier. In the latter case, Quantifiers are interpreted *in situ* (e.g., this is possible via the type raising of the verb: if the verb is of type $<e,<e,t>>$, it may be raised to type $<<<e,t>,t>,<e,t>>$, which could directly combine with a Quantifier of type $<<e,t>,t>$).[17] Fox (2000) follows May (1985) in maintaining that a Quantifier can (and must) always be made interpretable via Quantifier Raising: for instance, an object Quantifier must be raised at least to the edge of *v*P. According to Fox, it is a requirement for a Quantifier Raising movement that is "longer" than the one that brings the Quantifier to the closest possible position where it becomes interpretable that this "longer" than necessary Quantifier Raising should establish a scope interpretation for the Quantifier that would not be available without applying it (the principle of Scope Economy). I adopt Fox's Principle of Scope Economy applying to "long" Quantifier Raising in what follows; at the same time, I subscribe to Reinhart's analysis of quantifiers interpreted *in situ* (on which a Quantifier may be interpreted *in situ*, with the verb undergoing type-raising, if necessary).[18]

The suggested movement of "Adverbial Raising" is similar to Quantifier Raising in a number of respects: (i) the direction of movement is only upward, (ii) it may target any position where the given adverbial is interpretable (compare (39) and (40)), and (iii) it is triggered by the fact that the given adverbial is not interpretable in its surface position (its sister constituent is the of the (selected) semantic type that is required by the adverbial; compare section 3.1). Nevertheless, it is different from Quantifier Raising inasmuch as (iv) the raised adverbial can never be interpreted in its surface position. I suggest considering "Adverbial Raising" as an operation that does not leave an interpretable trace. The question is whether it can be assumed that Adverbial Raising can occur overtly in Hungarian, similarly to Quantifier Raising. This is a viable postulation if Adverbials are not interpreted in their base position, as has been presumed. [19]

Let us look more closely at the property of Adverbial Raising that the raised adverbial is interpreted in the target position of its movement. It is a common feature of adjuncts discussed in this paper that they are not subcategorized for. Therefore, the presence of postverbal adverbials in question is not required by any constituent of the clause. In this respect, they resemble the postverbal Quantifiers in (44b) and (44d), which are interpreted only high: they cannot be interpreted postverbally either, so they cannot leave a variable-type trace. As a result, it can be concluded that it holds of both Adverbial Raising and Quantifier Raising that they do not leave an interpretable trace in the surface position of the elmenent undergoing the movement operation if the element is not interpretable in that position.

As a matter of fact, the suggestion that there exist movements without interpretable traces left in the base position has been raised in the literature in relation to A-movements since the copy theory of movement (Chomsky 1995) replaced the classical trace theory. As opposed to A-bar (or operator) movements, A-movements applied for arguments do not create operator-variable dependencies: the moved element does not include an operator. The expressions moved by A-bar movements would not be interpretable in their target position, if their operator constituents did not bind a variable in their nuclear scope. However, in the case of A-movements, the question of leaving a bound variable is much more theory-dependent; for example, Lasnik (1999) suggests that A-movements do not leave a "trace" (from the perspective of the copy theory of movement: the base copy is completely deleted, and A-movement is not "reconstructable"). Son (2003) argues that *wh*-scrambling in Japanese does not leave a trace either. Assume then that Quantifier Raising does not have to leave a trace (interpreted as a bound variable) either (i.e., the base copy of the Quantifier can be deleted completely), in case the representation (in which only the higher copy of the Quantifier is

present, and it does not bind a variable) is interpretable. This is possible in exactly those cases in which the Quantifier is an adverbial expression such that it is allowed to appear in the target position of the movement in the light of section 3.1, since it is interpretable there (see examples (44b) and (44d)). Adverbial Raising operating on postverbal adverbials has the same effect: the adverbials can fully be interpreted in the (preverbal) target position without binding a variable in its base position (which would lead to uninterpretability). In view of their symmetry, Quantifier Raising and Adverbial Raising appear to be one and the same operation (henceforth referred to as Raising). The single difference between them (see (iv)) is illusory, and they are subject to the same general rule regarding the interpretation of their "trace" copy.

4.3 Scrambling

Let us return at this point to (49). I claimed that the scenario in (49) would be possible if there were a movement operation within the postverbal field that would move the adverbial or the Quantifier higher in the structure, while its interpretation would occur in its original position. As I pointed out, it is known that such so-called "full reconstruction" is not available in the case of (Quantifier) Raising.

(49) ? Verb X Y (X)

However, "full reconstruction" is possible in the type of Scrambling found in Japanese (and Korean etc.; save for the influence of other requirements, it is not obligatory). In actual fact, this is the main idiosyncrasy of "Japanese-type" Scrambling. In Chapter 4, I argued for an analysis of nominal arguments in the postverbal field of the Hungarian clause in which Japanese-type Scrambling is typical of these nominal arguments. Nonetheless, Scrambling – in the (partly) free word order languages that allow it – can typically apply not only to nominal arguments but also to other categories as well, such as a Prepositional (or Postpositional) Phrase or a subordinate clause. On the basis of the generalization in (33), I conclude that the order of postverbal constituents is free in Hungarian, regardless of their category.[20] Scrambling can be taken to apply to nominal constituents as well as Postpositional Phrases, clausal arguments of the verb and adverbials, irrespectively of whether they happen to be quantifier expressions or not. [21]

The question arises, however, whether there is convincing evidence for the application of Scrambling to adverbials and Quantifiers. In other words, it may be asked if the data examined are simply compatible with assuming the general applicability of Scrambling (since the operation Raising already covers every pattern that could be created by Scrambling applied to adverbials or Quantifiers), or there are data which could just be explained in terms of adverbials or Quantifiers moved by Scrambling (and reconstructed later).

There are two possibilities to answer this question. The first one is based on the fact that it cannot be explained in terms of Raising if it is found that an adverbial/Quantifier is interpreted lower than its surface position (i.e., in the scope of another element, which is lower in the structure) when this cannot be the result of the covert Raising of another element (see (48d)) appearing between the position of interpretation and the surface position. Such a construction could be considered as the realization of (49), in which X moves higher than Y via Scrambling, although X can still be interpreted below Y because of the availability of full reconstruction. Another possibility is to find an adverbial/Quantifier to which Raising cannot apply, but which is still manifested higher than its base position.

Raising, I have claimed, can apply to elements that cannot be interpreted in their position. Nominal arguments that are not quantifiers (i.e., their semantic representation does not involve a generalized quantifier) are not of this kind. For example, nominal expressions containing *kevés* 'few/little' (in positions other than that of the second focus of the clause) as well as those containing bare nominals belong to this group (see Szabolcsi 1997, as well as Chapter 2). In (51b) below, the *kevés*-NP subject is preceded by a Quantifier object, and the relevant reading of the clause is the one in which the Quantifier has narrower scope than what would normally correspond to its surface position (certainly the surface scope reading is also easily available). Since scope reconstruction is impossible in the case of Quantifier Raising, and because the *kevés*-NP subject is subcategorized for and it is not a Quantifier, Raising cannot produce this reading. The expected reading is available, if the Quantifier object moves above the subject via Scrambling and then it is reconstructed. The same phenomenon is illustrated by (51b), in which the adverbial *újra* 'again' can also be generated low (cf. von Stechow 1996), which refers to the reconstruction of the earlier stage in the relevant reading (restitutive reading; the meaning might be paraphrased as follows: "it is not the case that there are only few people who restore their birth names").

(51) a. Nem láttak minden filmet kevesen
not saw-3RD-PL every film-ACC few
'Not every film was seen by few people.'
(OK nem > kevés > minden / OK nem > minden > kevés)

b. Nem veszik fel újra kevesen az eredeti nevüket
not take VM again few the original name-POSS-ACC
'It is not the case that there are only few people who restore their birth names.'
(OK nem > kevés > újra / OK nem > újra > kevés)

The other test mentioned above is presented by the examples below. A Quantifier and an adverbial precede the subject in the two sentences respectively, in spite of being generated lower than the subject (the relevant reading of *újra* 'again' is a restitutive reading again).

(52) a. A PARTIN mutatott be mindenkit János Marinak
the party-SUP introduced-3RD-SG VM everyone-ACC John Mary-DAT
'It was at the party where John introduced everyone to Mary.'

b. Felépítették újra a helyiek a földrengés által ledöntött sziklaképződményt
rebuilt-3RD-PL again the locals the earthquake by destroyed rock.formation-ACC
'Locals have rebuilt the rock formation destroyed by the earthquake.'

As can be seen, there are empirical reasons to extend Scrambling operations to the set of Quantifiers and adverbials as well. Tt may then be assumed that (fully reconstructable) Scrambling can apply to every postverbal element, which gives an explanation of free word order in the postverbal field. The pattern in (49) is thus created by Scrambling.

To sum up, I have made the following proposal regarding the syntactic analysis of adverbials and Quantifiers and the syntax of the postverbal field. (i) Quantifier Raising, which is considered in Hungarian syntax as a movement operation triggered by type conflicts (see, e.g., É. Kiss 1991), and which is optionally overt or covert (Chapters 2 and 3), can apply to adverbials which are generated in positions hierarchically lower than their position of interpretation, and thus they cannot be interpreted in their base position. (ii) Scrambling, which I previously used in order to account for postverbal nominal arguments (Chapter 4), can apply to other elements of the postverbal field, including postverbal adverbials and Quantifiers. I argued that the peculiarities of Hungarian free word order discussed in the present chapter can be explained in terms of these two movement operations.

4.4 Domains of application

The remainder of the chapter is dedicated to the domains of application of Raising and Scrambling. As will be clear from the data presented in Section 3.1, Scrambling cannot be responsible for any movement within the preverbal field, nor for any movement from the postverbal field to the preverbal one (otherwise the relative scope of preverbal elements would be just as radically free as that of their postverbal counterparts, since Scrambling is an operation that can optionally be reconstructed). As for Raising, it has been shown that is can move elements not only from within the postverbal field to the preverbal one, but also within the postverbal field. On the basis of the established empirical generalization in the generative literature on Hungarian that the mapping between the surface syntactic positions of preverbal elements and their relative scope is an isomorphy (see section 1), not only Scrambling but also Raising should be inapplicable *within* the preverbal field.[22] The distribution of the Scrambling and Raising is shown in (53) and (54).

(53) *Scrambling*

a. * [X<-------Verb [-------X]]
b. * [X<---X Verb [ ]]
c. OK [Verb [X<---X]]

(54) *Raising*

a. OK [X<------- Verb [-------X]]
b. * [X<---X Verb [ ]]
c. OK [Verb [X<---X]]

The scheme for Topicalization can be seen below:

(55) *Topicalization*

a. OK [X<------- Verb [-------X]]
b. ? [X<---X Verb [ ]]
c. * [Verb [X<---X]]

The topicalization of arguments shows that this kind of movement is capable of moving an element from the postverbal field to the preverbal one (see (55a)), while it does not work within the postverbal field (see (55c)). The schema in (55b), marked by ?, represents topicalization within the preverbal field: expressions undergoing this form of topicalization are generated preverbally and can appear above nominal topics: e.g., Quantifiers functioning as topics (see (44)), or scene setting/frame temporal or locative adverbials (see (8)). The appearance of these elements in topic positions does not prove the existence of (55), as they could also be base-generated there (note that Quantifiers are also interpretable *in situ* in such positions; compare subsection 3.2.2, especially footnote 20). However, the examples containing a bound pronominal variable, such as (56a) and (56b), clearly show that these Quantifiers or adverbials in topic positions can originate in a position within the scope of another Quantifier in the Quantifier field.

(56) a. Minden jelenlévő tanítványának Chomskyt mindkét professzor
every attendant student-poss-dat Chomsky-acc both professor
bemutatta
introduced-3sg
'Both professors introduced Chomsky to the student of every attendant.'

b. A hazájában állítólag minden prófétát félreértenek
the home-POSS-INE allegedly every prohet-ACC misunderstand-3PL
'Allegedly, every prophet is misunderstood in her/his home.'

Nevertheless, this still does not prove that these expressions are base-generated in the preverbal field, below Topic positions, since they could also move out of the postverbal field via Raising. If such an expression is generated in the postverbal field, where it is not interpretable *in situ*, then Raising may apply to it. Based on its earlier definition, Raising moves an expression from a position in which it is uninterpretable to a position in which it is interpretable. In the case of Quantifiers, Raising leaves a trace in the base position, since (and if) it is necessary for interpretability. As frame locatives or Quantifiers in examples similar to (56a) and (56b) can easily be interpreted in Topic positions (such "high" Quantifiers may be interpreted even without a trace left by movement), such expressions could move from within the postverbal field to a Topic position via Raising as well.

Before concluding this section, let us briefly examine the distribution of the three movement operations just summarized. In the absence of negative evidence, I assume that

Topicalization, similarly to the other two operations, cannot be applied within the preverbal field (i.e., (55b) is likewise impossible, similarly to (53b) and (54b)). Consider now Scrambling and Topicalization. It can be noticed that (a) both movements are categorially non-selective, (b) both are recursive, and (c) both are restricted to overt syntax; their distributions are different: (i) Scrambling cannot move anything from the postverbal field to the preverbal one, whereas Topicalization can, and (ii) Scrambling can occur within the postverbal field, whereas Topicalization cannot.[23] In short, the distribution of the two movements with respect to the postverbal and preverbal fields shows a complementary pattern (save for the impossibility of movement within the preverbal field). The assumption is straightforward: these two types of movement are two realizations of one and the same operation. This statement can be verified only if we can identify the independent factors responsible for the differences between the two operations.

As for topicalization, Cinque (1990) shows that it does not create a quantificational dependency (as opposed to, for instance, focus or *wh*-movement). The trace of topicalization (as opposed to that of quantificational movements) is anaphoric (see Cinque ibid., Lasnik and Stowell 1991, Rizzi 1997). The semantic type of this trace (as opposed to those left of Quantifier Raising and other quantificational movements), as an anaphor, corresponds to the semantic type of the topicalized constituent itself. According to É. Kiss (1992, 1994a, 1995), topicalization in Hungarian brings about a syntactic configuration of predicating over a logical subject. In É. Kiss's (ibid.) view, topicalization differs from English-type NP-movement only in terms of its locality conditions (due to independent reasons of Case assignment), in case it involves long movement (across clause boundaries). [24]

Japanese-type local (short) Scrambling typical of the postverbal field in Hungarian bears the properties of A-movement (NP-movement) (see Surányi 2006a, b and the references cited there), and it does not require the moved element to be specific (or "referential"). In the case of Hungarian, this is not surprising (based on the Mapping Hypothesis of Diesing (1992)) as Scrambling occurs within the functional projection functioning as the logical predicate (AspP or FocP). As a result, Hungarian Scrambling does not divide clauses into logical subjects and predicates. Certain Scrambling movements in some languages tend to be analyzed as topicalization targeting a low, "middle field" topic position; however, only nominal expressions with specific reference may undergo this operation.

As can be seen, (Hungarian) topicalization and (Hungarian) Scrambling are very similar movement operations. The fundamental differences between them are the following:

(i) Topicalization does not occur within the local range of the proposition (which differs crosslinguistically; e.g., it can be *v*P or TP etc.), as it targets a position in the higher field (i.e., it may be long movement), whereas Scrambling is an operation taking place within the proposition, thus it is naturally local; (ii) as opposed to Scrambling, topicalization creates a logical subject–logical predicate articulation, in which the topicalized element functions as a logical subject (hence the specificity requirement of topics). (i) and (ii) are closely related: during topicalization, the syntactic configuration described in (i) is interpreted in the manner described in (ii).

From the perspective of the syntax-semantics interface, I suggest the following generalization:

(57) If a non-focus expression E is positioned outside a clausal domain D of Type 3, and E binds a D-internal variable of the same semantic type as that of E in the syntactic representation, then D is interpreted as a predicate and E is interpreted as D's logical subject, i.e., as an aboutness topic.

Although we need not identify Type 3 in specific semantic terms for the model to get off the ground, it may be noted that in view of the results in Chapter 3, Type 3 is at least as 'big' as a tensed proposition, i.e., a proposition with a time variable bound by an appropriate tense operator.[25] Translating (57) into linear terms, on the basis of (57), if an expression moves from the postverbal field into the preverbal field (thus it precedes the Verb Modifier or Focus) leaving a trace (variable) in its base position, then it must be interpreted as a topic. A SEM interface mapping rule in terms of the relative configuration sketched in (57) may serve as an appropriate trigger of topicalization movements, given the assumption of a generalized Last Resort (see Chapter 1). Recall that an analogous treatment was advocated in Chapter 3 of id-focus movement.

Besides Scrambling and Topicalization, Raising also had an important role in the analysis above. Raising – similarly to the other two movement types – can occur within the postverbal field as well as move an element from the postverbal field to the preverbal field. The fundamental difference between Raising and the other two movements is based on the interpretability of the moved element in its base position: Scrambling and Topicalization move elements that are interpretable *in situ*, whereas Raising moves elements that are uninterpretable in their base position. The two kinds of operations can apply to two disjoint sets of elements. This is unsurprising in the context of a Principles and Parameters

framework: all movement transformations are simply cases of one basic operation of movement, with differences between them following from the nature of the elements they apply to, the nature of the positions they target, etc.

The optional overtness or covertness of Quantifier Raising was accounted for in Chapter 3 in terms of an interaction of factors, including the PHON interface condition (Chapter 3, (48)), the PHON economy condtion (Chapter 3, (38)), and the syntax–PHON mapping rule (Chapter 3, (39)) below:

(58) Topics must not belong to the same IntP as the comment.

(59) Minimize the number of IntPs.

(60) Adjunct phrases are mapped by default to an independent IntP.

It is these constraints that favor topicalization, i.e., a movement matching (57), to be overt. If a covert spell out pattern is selected, then (58) can only be satisfied by adding IntP boundaries around the in situ topic phrase, which is costly, in view of (59). Taking topics to be adjoined, rather than being hosted by a dedicated functional specifier in the syntactic template of the clause, realizing the topicalization transformation as overt movement satisfies both (58) and (59) without having to overwrite default prosodic structure. Topicalization is correctly predicted to be limited to overt syntax.

I conclude this section by raising the possibility that the pattern of movement in (48d), repeated below as (61a), is realized not only by covert Quantifier Raising within the post-verbal field, but in fact it is the proper analysis of Hungarian post-verbal scrambling, which I proposed to analyze in Chapter 3 as realizing the pattern in (49), reproduced as (61b).

(61) Scrambling

a.	Verb (X) Y X	here
b.	Verb X Y (X)	up to now (see Chapter 3)

In Chapter 3 I argued extensively that post-verbal scrambling involves a local transformation with A-movement properties, and, following the dominant view of scrambling across languages, I took this scrambling movement to be overt in Hungarian too.

However, the results of Chapter 3 are preserved also on an analysis of the kind in (61a), taking scrambling to be a covert A-movement operation, applying in sentences with the ‘scrambled’ O>S surface order to the subject rather than to the object. Assume that what

underlines the radical freedom of the positioning of arguments within the postverbal field is analogous to what was proposed for post-verbal adverbials that are interpreted in a pre-verbal, "high" position in full; namely, base-generation in a position lower than the position of their interpretation.

Recall that an issue left open in Chapter 3 was that of the trigger of scrambling in Hungarian. No trigger seemed identifiable as post-verbal scrambling has no direct interpretive effect in terms of specificity, information structure or the like. I suggest that if it is assumed that Hungarian scrambling is an instance of (61a), then the trigger can be identified: for instance, an agent generated lower than the specifier position of *v*P will need to raise there to receive interpretation as a thematic argument. As this movement is not triggered to a strong feature-checking position, it will remain covert, by default.[26]

This alternative analysis of the scrambling movement in terms of low base-generation plus covert movement ("inverse scrambling") may shed light on a question left open in Chapter 2, Section 5.5. Discussing examples like (61) and (62) (=Chapter 2, (40) and (41), respectively), it remained an open issue why their status is only mildly degraded, on in the case of (62), not degraded at all. In Chapter 2 I suggested that A-movement cannot be reconstructed across a focus, and adopted the view that decreasing (and non-monotonic) numeral indefinites, aka counters (Szabolcsi 1997), are foci. This led to correct predictions for the (non)availability of certain scope interpretations in English. However, on an overt movement scrambling account of postverbal O>S order, it is expected that the scrambled universal quantifier object cannot reconstruct for scope across the subject counter to get narrow scope reading. The possibility entertained in Chapter 2 was based on the independently motivated assumption that counters in Hungarian may function as id-foci. But if the counter subject is interpreted as an id-focus in the examples below, then, given that Hungarian has covert id-focus movement within the post-verbal field (see Chapter 3), which can lead to wider than surface scope, inverse scope relations are predicted to be available below.

(62)	MA	oldott	meg	minden feladatot	kevés diák	O > S, ??S > O
	today	solved	PRT	every exercise-acc	few student	

'It was today that few students solved every exercise.'

Nevertheless, I found no reliable way of controlling for (the lack of) an id-focus interpretation in these examples, and it may easily turn out that they may have an inverse

scope interpretation even when the counters they involve are not interpreted as an id-focus, but merely as an ordinary (alternatives based) focus. On the "inverse scrambling" analysis of non-canonical argument order in the postverbal field that we are entertaining here, the option of inverse scope is predicted not to be linked to an id-focus interpretation of the counter. This is because on this analysis it is not the object that undergoes overt scrambling movement across the subject counter, but it is the subject counter that undergoes covert scrambling movement across the object, which may be an indefinite in, as in (41b).[27] Given the A-movement properties of this scrambling discussed extensively in Chapter 3, no intervention effect is predicted to arise.[28]

5 Closing remarks

I have argued in this chapter that the syntactic flexibility and the syntactic rigidity involved in adverbial ordering be simultaneously captured in a model that is based on the semantic properties of the elements involved (namely, those of the various adverbial classes, as well as those of the clausal domains they semantically compose with). The radical freedom of the choice between the pre- and post-verbal positioning of adverbials, with no effect on semantic interpretation, was derived as an instance of an option to base-generate adverbials in a lower position than their interpretive positions, from where they must undergo covert movement to the syntactic site of their interpretation. No dedicated syntactic templates, and no formal feature checking was proposed to model aspects of the rigidity and partial flexibility in the word order of pre-verbal adverbials, either. A postulated parametric property of Hungarian that was not deduced from deeper principles of grammar is that this language allows both arguments and adverbial adjuncts to be base generated and spelled out lower than their position of semantic interpretation. This yielded a revised account of the o radically free word order alternations internal to the post-verbal field, identifying a proper trigger for the movement operation underlying the permutations.

I conclude the chapter by returning to a loose thread in the discussion of the relative position of the Verb Modifier (VM) and fronted Focus. Throughout the presentation I have taken Focus to be higher in the structure than the neutral positon of VM. According to results obtained in Chapter 3, the position of the VM in a neutral clause and that of fronted Focus is the same; it was identified as the specifier of TP, where VM raises to in neutral clauses, and which is occupied by the fronted Focus in clauses with an id-focus, allowing VM to stay

lower, in the specifier of AspP. It this is so, then we lose our explanation of the fact that Low Adverbs may precede the VM but they cannot precede the Focus.

I suggest that the two types of results are not inconsistent, if we assume that it is not the VM element itself that raises from the specifier of AspP to the specifier of TP, but the whole AspP projection. This movement is preceded by movements removing all the material to the right of Asp from AspP, as Koopman and Szabolcsi (2000) proposed. These 'purging' movements may be required precisely because it is AspP that raises to [Spec,TP]: the specifier of TP apparently does not tolerate post-head material in the phrase that raises to it, either in the case of elements functioning as Focus nor in the case of elements functioning as VM. If a Low Adverb LA is adjoined to AspP, as the analysis in the present chapter has it, then it raises together with AspP to [Spec,TP]. Depending on whether the verb is taken to move by head movement separately to T, or stays in the AspP constituent raising to [Spec,TP], we may generate the two structures in (41). This resolves the technical point of tension between the relevant outcome of the present chapter and Chapter 3.
[1]

(41) a. $[_{TP}\ [_{AspP}$ LA $[_{AspP}$ VM V ----]] T [. . .]]

b. $[_{TP}\ [_{AspP}$ LA $[_{AspP}$ VM ----]] $[_{T}$ V] [. . .]]

In fact, there may be indirect evidence for the analysis in (41a). É. Kiss (2002) points out that coordination below the VM, including the verb and material following it, is unacceptable, while coordination below the fronted Focus is possible. If neutral sentences have the structure in (41a), then the resistence of the string beginning with the verb to coordination (and in fact to some forms of ellipsis) is predicted: this string does not form a constituent under (41a).

Notes

[1] I concentrate in this chapter on optional adverbial adjuncts, and disregard obligatory adverbial elements that function as a complement (i-ii) or secondary predicate (iii), or must appear for informations structural or other reasons (iv).

(i) He treated her *(rudely)

(ii) János *(rosszul) viselkedett
J-nom badly behaved
'John behaved badly.'

(iii) A csapat a meccs végére *(laposra) verte az ellenfelet
the team-nom the game end-poss-to flat-onto beat-past the opponent-acc
'The team knocked the opponent out by the end of the game.'

(iv) This wine sells *(easily)

[2] A semantic distinction between different types of adverbs is commonly accepted. For instance, a basic distinction between sentence and verb or verb phrase adverbs is generally assumed, though, as Tenny (2000) notes, its nature and how it figures in semantic categorizations of adverbs has long been a subject of discussion (e.g., Thomason and Stalnaker 1973, Lakoff 1973, McConnell-Ginet 1982).

[3] In what follows, I deliberately avoid relying on any technical apparatus that is not indispensable to develop my proposal. As my proposal is compatible with a variety of formal semantic implementations, in presenting the analysis I refrain from explicitly adopting any one of the specific possible alternative executions, since a choice among these will not be directly relevant to my central claims.

[4] These terms, even if commonly uses, are somewhat imprecise. Topic and focus elements are not defined as such directly by their discourse roles (cf. the "old" ("given") vs. "new" status in terms of the Prague School). The crucial factor in the case of Focus is the (logical) semantic identificational logical predicate role (which also affects truth conditions and involves the alternatives of the focussed constituent; see É. Kiss 1998), whereas it is the role played in the predication expressed by the clause in the case of Topics (so-called "aboutness topics"; see Strawson 1964, Kuno 1972). These roles do not strictly correlate with the concepts "old" ("given") and "new".

[5] To deduce the fact that the syntactic range characterized by free word order corresponds linearly to the field that follows the verb, one of the following two generalizations needs to hold. (i) The verb must stay within the VP in both neutral clauses and non-neutral ones (which include negation, *wh*-expressions or Focus) in the surface word order. (ii) When the verb does move out of the VP, no VP-external constituent (e.g., an adverbial) may be placed between the surface position of the verb and the left edge of the VP. This is necessary to avoid the (false) prediction that such elements (if any) would have to precede the arguments and optional adjuncts positioned inside the VP. (i) is apparently contradicted by the applicability of certain syntactic operations (e.g., ellipsis, coordination) to the whole of the post-verbal domain without affecting the verb (see, e.g., É. Kiss 2002, Surányi to appear a). Further, the status of the descriptive condition in (ii) is dubious.

[6] The term "Scrambling" is also used in a broader, descriptive sense in the literature, to refer to free constituent permutation (e.g., É. Kiss (1994, 2002, 2003) also uses it in this sense). In this dissertation the term is used in a narrow sense of the optional movement account of Chapter 4.

[7] The example in (5b) is ungrammatical due to the generalization in (4a): the adverbial *hangosan* 'aloud' is not interpretable as the modifier of the constituent [*gyakran felolvasta a dolgozatokat*].

[8] As pointed out at the beginning of the current section, it is not the aim of this chapter to provide a comprehensive discussion of adverbials in the clause. The enumeration of High Adverbials as well as of the types of adverbials listed below is far from exhaustive. As noted at the outset, I also put aside adverbials functioning as secondary predicates (e.g., resultative adverbials or the different types of depictive adverbials), nor those selected as arguments.

[9] In the case of a negated verb form, *már* 'already' functions as the adverbial of future time with respect to the reference time. Some speakers use it as a High Adverbial in this sense:

(i) %Már János nem jön ma el
already John not comes today VM
'John will not come today.'

(ii) %A hátralévő időben már az elnököt nem mondathatták le
the remaining time-INE already the president-ACC not depose VM
'The president cannot be deposed in the remaining time.'

[10] An anonymous reviewer of a paper version of this chapter suggested that adverbials like pre-Focus *épp(en)* 'just' and *pont(osan)* 'exactly' can be placed only above FocP, and therefore they constitute a separate, fourth group in Table 1. The group of such adverbials may be defined in terms of their sensitivity to Focus: they belong to the same class as *csak* 'only'. However, it is not really clear whether (a) these focus-sensitive adverbials modify the focussed constituent itself, or (b) they are adjoined to FocP.

In any case, they can certainly appear quite far from the focussed constituent, in the postverbal field as well (see (i)-(iii) below). In the case of (a), an explanation based on Stranding might be in place, whereas in the case of (b) the analysis of the movement defined as Raising in subsection 3.2.2 could be extended to them.

(i) JÁNOS késett épp el
John was.late just vm
'It is John who is late now.'

(ii) JÁNOSNAK árultam pont el
John-DAT disclosed-1ST-SG exactly VM
'It is John who I disclosed it to.'

(iii) JÁNOS késett csak el
John was.late only VM
'Only John was late.'

[11] Clauses containing *gyorsan* 'fast' are ambiguous. For instance in (i) either the period of writing a letter or the preceding period can be short. It is possible that this ambiguity does not simply depend on the structural position of *gyorsan*: this adverbial may belong to both the High Adverbials and the

Middle Adverbials (for further discussion, see Surányi to appear b). In the former case, the ambiguity of the clause may be traced back to the type raising opportunity (2←1 here) of the calculus to be presented later, while in the latter case it may be because of the flexible selectional properties of *gyorsan* (selecting either type 1 or type 2 here). In example (ii) below, in which *gyorsan* is focussed, a third reading is also available, in which the adverbial modifies only the activity component of the complex accomplishment event. The difference between the latter and the first reading mentioned above is illustrated in example (iii).

(i) Gyorsan megírtam a levelet.
fast VM.wrote-1ST-SG the letter-ACC
'I wrote the letter fast.'

(ii) Gyorsan írtam meg a levelet
fast wrote-1ST-SG VM the letter-ACC
'The way I wrote the letter was fast.'

(iii) Gyorsan megírtam a levelet, annak ellenére, hogy nagyon lassan írtam.
fast VM.wrote-1st-sg the letter-ACC despite that very slowly wrote-1ST-SG
'I quickly wrote the letter, in spite of the fact that I wrote very slowly.'

[12] It is important that the generalization in (22) is in independent of operator movements (including Topicalization, Quantifier Movement or Focus Movement, which all target a position in the preverbal field) or the movement of 'incorporation' into the position of the Verb Modifier. In other words, every (free) adverbial may appear preverbally without being moved by operator movement or incorporation. The exact opposite is supposed to be true of argument adverbials (see (i) below). This is follows from the assumption that (a) arguments are generated in *v*P and that (b) the verb always moves out of *v*P. I am not aware of examples contradicting the generalization in (i).

(i) An argument adverbial may precede the verb only if it is moved there by operator movement or incorporation.

[13] In a semantically based theory of adverbials in which the types selected by adverbials are invariable, the types of modified constituents must also be constant. This may be available via type shifting (e.g., Ernst 2002), or it may also be assumed that there is an abstract element with no phonological realization in the syntax (for example, a clause with no Quantifier in it may still be considered a "DistP" type of domain, if an adverbial in the clause is supposed to be able to modify "DistP" type domains only; that is, it selects the type "DistP").

[14] Bernardi and Szabolcsi (2008) provide a comprehensive semantic (and syntactic) analysis of the Hungarian preverbal field based on a proof-theoretic calculus. The mini-calculus designed to analyze the syntax of different classes of adverbials presented above could, in theory, be transposed into Bernardi and Szabolcsi's model.

[15] If an adverbial that typically selects Type 2 (i.e., it is a Middle Adverbial) may marginally select constituents that are of Type 1 for some speakers (i.e., if it can also function as a Higher Adverbial),

then it may marginally appear above topics (see (i)). Such variation is discussed in Surányi (to appear b: Chapter 6).

(i) %Gyorsan János mindenkit megnyugtatott.
quickly John everyone-ACC VM.reassured
'John quickly reassured everyone.'

According to an anonymous reviewer of a paper version of this chapter, the grammaticality of the examples similar to the ones in (ii) below is dubious; (s)he also remarks that my model predicts them to be grammatical (compare (11a, i) and (27)).

(ii) a. Jánost mindenki szerintem mindenhova meghívja.
John-ACC everyone in.my.opinion everywhere VM.invites
'In my opinion, everyone invites John everywhere.'
b. Jánost minden ünnepségre valószínűleg meghívták.
John-ACC every ceremony-SUBL probably VM.invited-3PL
'John was probably invited to every ceremony.'

By searching for *"mindenki(t) valószínűleg"* 'everyone-(ACC) probably' or *"mindenki(t) szerintem"* 'everyone-(ACC) in.my.opinion' in Google's online search engine (accessed on 20 October 2008), there are a number of search results in which these word strings can be found in the preverbal field of the clause, as can be seen below:

(iii) Ilyenkor mindenki valószínűleg magát adja
this.time everyone probably herself/himself gives
'Probably everyone shows her/his true self under these circumstances.'

(iv) Miniszter úr, mindenkit szerintem napok óta az izgat, hogy ön találkozott
minister mister everyone-ACC in.my.opinion days since that excites that you met-3RD-SG
Kulcsár Attilával vagy sem?
Kulcsár Attila-INS or not
'Mr. Minister, I think everyone has been excited about whether you met Attila Kulcsár or not for days.'

[16] Even though it is not straightforward that this class of Quantifiers exists, temporal adverbials similar to that in (44a) and frame/scene setting locatives similar to that in (44b) are here regarded as members thereof. It is doubtful whether these adverbials are generated just above the position of Verb Modifiers or above (the surface position of) Focus. In fact, as far as the narrow scope of the Quantifier is concerned, these adverbials in (i) and (ii) below are supposed to be generated below (the surface position of) Focus.

(i) A MI kertünk szokott minden évben tavasszal és ősszel virágba borulni
the our garden-POSS AUX-HABITUAL every year-INE spring-INS and fall-INS flower-ILL burst-INF
'It is our garden that bursts into flowers every spring and autumn.'

(ii) Csak a TUDÓSOK örvendenek Magyarországon is nagy megbecsültségnek
only the scientists rejoice-3RD-PL Hungary-SUP also big appreciation-DAT
'Only scientists are honoured also in Hungary.'

[17] A subject Quantifier may be interpreted *in situ* even without type raising: subject Quantifiers are of type $<<e,t>,t>$, while predicates are of type $<e,t>$ (since there is only one argument missing, which is the subject) (see, e.g., Heim and Kratzer ibid.). Quantifiers generated in topic positions (if they exist) may be interpreted in the same way.

[18] It must be underscored that Quantifier Raising can only apply to an expression that is uninterpretable *in situ* (even though it may become interpretable via the type raising of the verb). This means that a non-quantifier nominal expression that is interpretable *in situ* (e.g., DPs containing an indefinite article or a weak numeral) cannot undergo Quantifier Raising, even if this would result in inverse scope.

[19] Boskovic és Takahashi (1998) (B&T) and Boskovic (2004) propose the opposite of what has just been presented to handle Japanese (non-local) Scrambling. According to B&T, in the case of semantically vacuous Scrambling the given element is base-generated in its surface position; i.e., if the element is an argument, it is generated higher than its argument position or that of its interpretation, and it is later lowered into it. The way my proposal deals with postverbal adverbials interpreted above the surface position of the verb is the opposite: as these elements are not interpretable in their hierarchical positions in the postverbal field, they are raised into their positions of interpretation. In this case, similarly to B&T's approach, there is nothing to be interpreted in their surface positions.

[20] This freedom is syntactic in nature: the relative position of certain constituents may be affected by prosodic (including the phonological length of the constituent), parsing etc. factors (see, e.g., Behaghel's Law cited by É. Kiss (to appear d, e)).

[21] The assumption that adverbials can undergo Scrambling has long been disputed in the literature. For example, it has been proposed that adjunct adverbials in German (Frey 2003, Pittner 2004) and Russian (Bailyn 2001, 2004) can undergo Scrambling, and so can Japanese selected adverbials (as pointed out by Yokota 2004). Shields (2007) reaches the same conclusion about both Japanese and Russian, and Alexiadou (1997) also argues for the possibility that Scrambling can apply to adverbials. According to Grewendorf and Sternefeld (1990), maximal projections (except VPs and IPs) can undergo Scrambling in general.

[22] On the basis of the proposed analysis, this inapplicability may be due to the fact that all adverbials, Quantifiers and topics appearing in the pre-verbal field are adjoined to AspP/FocP representing the predicate. For, it is generally impossible to move a constituent from the adjunct position of a given category to another adjunct position of the same category.

[23] When describing the categorial selectivity of Scrambling, Müller (1995: Chapter 3 section 6) argues that in this respect there is no fundamental difference between Scrambling and Topicalization (and *wh*-movement) in German. This holds of Hungarian as well.

[24] "Topicalization" is a term that does not cover a uniform class of operations across languages. While topicalization is recursive in Hungarian, only one topic is allowed per clause in V2-type languages (such as German and Dutch) or in Japanese. Hungarian topicalization does not show "topic island" effects, unlike its English or German counterpart. See the works by É. Kiss cited above for further discussion. Unlike Scrambling, topicalization triggers verb movement and is in complementary distribution with *wh*-movement in V2-type languages, whereas both topicalization and Scrambling are independent of *wh*-movement and neither of them triggers verb movement.

(i) *That man we know that this book Mary gave to

(ii) OK Annak az embernek tudjuk, hogy ezt a könyvet Mari odaadta
that-DAT the person-DAT know-1ST-PL that this-ACC the book-ACC Mary gave-3RD-SG
'We know that Mary gave this book to that man.'

[25] This general analysis may be implemented in a number of ways as to the identification of the semantic types involved. For example, Gunji (1987: 170) does not consider constructions involving (aboutness) topicalization to be a combination of a predicate and an individual, but takes such constructions to involve a relation between an individual and a proposition containing an individual. That is, the semantic value of a topic+comment unit is not a proposition; this is exemplified in (i).

(i) R(Ken's room, The aunt cleaned Ken's room)

[26] It may be assumed that thematic role assigners in Hungarian have "weak" theta-features (see Surányi 2003), which do not require the relevant argument category to fill their specifier position in overt syntax. This parameter may work for argument scrambling, but unfortunately it does not readily extend to adjunct scrambling within the postverbal field or to Adverb Raising.

[27] Indefinites are not quantificational interveners. But examples where the object is a quantificational element (a potential intervener) are no different either: A-movement is not normally sensitive to quantificational intervention.

See Lasnik (1999) for data that can be interpreted as involving covert A-movement of the object in English, with the familiar effect of A-movement on scope interpretation, binding, etc. Lasnik's (ibid.) evidence to analyze this A-movement as *obligatorily* overt is inconclusive.

[28] Covert scrambling, as covert A-movements in general, is restricted to a local domain, perhaps corresponding to Chomsky's (2001) phase. Therefore no covert long scrambling from an embedded finite or subjunctive clause can be generated, correctly.

Chapter 6
Conclusions

The present monograph has sought to contribute to the investigation of two broad, complementary but interrelated themes in the study of natural language syntax, examining them in the context of the current minimalist research program (MP) of transformational generative grammar (TGG). These are: (i) the analysis of apparently free word order alternations, and (ii) the account of word order restrictions. The particular research questions I have investigated concern three related outstanding aspects of the approach: (a) the role of feature checking and Last Resort, (b) the role of syntactic templates, and (c) the Uniformity of Grammars.

In Chapter 2 of the dissertation I looked at the family of movements and positions that are related to scope-taking possibilities of different kinds of noun phrases in the clause. I have outlined a possible deconstruction of part of the syntactic template involved in cartographic approaches to the phenomena, suggesting that an alternative, and in fact more conservative, approach that directly draws on the semantic properties of the elements involved is not only less stipulative, but it also fares empirically better in accounting for the differential scope-taking options – and consequently: LF positions – available to the various classes of syntactic elements involved.

I advocated the following two points. First, the A-bar feature checking approach to Q-scope, which involves directed movements to functional positions in a pre-fabricated syntactic template, is both conceptually and empirically problematic (and Hungarian is far from supplying evidence in its favour). Second, when we combine the independently motivated covert scopal mechanisms of (i) QR, (ii) existential closure, and (ii) A-reconstruction, which is constrained by quantificational interveners like focus and by the Mapping Hypothesis, then the intricate pattern of Q-scope interactions is correctly predicted in an elegant manner. The alternative account presented relies on a generalized notion of Last Resort: QR of GQPs and

covert id-focus movement of counters are triggered not by abstract null morphosyntactic features; rather, they are licensed by virtue of the interpretations they lead to.

A repercussion of these results is that Quantifier Raising exists at the level of narrow syntax – an assumption that has recently been repeatedly challenged, perhaps most strongly in the specialized quantifier-projections approach, but also elsewhere. Further, if the analysis of Q-interaction presented here is on track, then A-reconstruction also must be available (alongside A-bar reconstruction), contra Chomsky (1995) and Lasnik (1999).

Chapter 3 reviewed the mainstream feature-checking- and hierarchical syntactic template based approach to focus movement in Hungarian, pointing out its weaknesses. An alternative was developed that – in accordance with a central objective of the dissertation – restricts the role of syntactic templates (STs) to what is necessary independently of the grammar of focus, arguing that both the (apparently) syntactic restrictions and the partial word order flexibility that are witnessed can be reduced to properties of the mapping at the interfaces to SEM and to PHON, respectively, without postulating either a special absolute syntactic position for focus in the clausal ST or checking of an uninterpretable [foc(us)]-feature. I extended the account to the apparently optional fronting of (non-topic) increasing distributive quantifier phrases. I proposed that this is due to the adjunct status of QR-ed quantifier phrase, which are therefore mapped to a separate IntP, taken together with the economy preference of the syntax–prosody mapping to minimize the number of IntPs.

An important result of Chapter 4 is that it has eliminated an alleged residual idiosyncrasy of Hungarian, the non-configurationality of its verb phrase, which goes against the Uniformity of Grammars hypothesis of the minimalist research program, by demonstrating systematically that a scrambling approach, based on a configurational *v*P, is readily formulable, and what is more, it is empirically superior. Modulo scrambling, Hungarian is configurational not only in its left periphery, but all the way down. It has also been shown that postverbal object–subject reordering in this language is akin in particular to short scrambling of the Japanese-type (and contrasts in crucial ways with German or Slavic scrambling).

The lack of a systematic semantic effect associated with scrambling precludes a SEM-interface based treatment of this apparently free alternation. Any semantic effects that are found, including those involving A-binding possibilities and options of scope interpretation, are those that arise as a by-product of being located in the hierarchical positions that the scrambled element subject to the alternation occupies in relation to other elements. A feature-checking based treatment is also unfeasible, because no interpretable feature or property could

be identified as a counterpart of a postulated uninterpretable feature that would trigger the scrambling movement. An provisional conclusion, which was then addressed in the following chapter, could be that in minimalist terms the post-verbal word order alternation under scrutiny is radically free and untriggered.

In the last part, Chapter 5 I proposed to identify the trigger of the scrambling movement, drawing on an intriguing analogy with certain post-verbal uses of adverbials. I argued in this chapter that the syntactic flexibility and the syntactic rigidity involved in adverbial ordering can be simultaneously captured in a model that is based on the semantic properties of the elements involved (namely, those of the various adverbial classes, as well as those of the clausal domains they semantically compose with). The radical freedom of the choice between the pre- and post-verbal positioning of adverbials, with no effect on semantic interpretation, was derived as an instance of an option to base-generate adverbials in a lower position than their interpretive positions, from where they must undergo covert movement to the syntactic site of their interpretation. No dedicated syntactic templates, and no formal feature checking was proposed to model aspects of the rigidity and partial flexibility in the word order of pre-verbal adverbials, either. A postulated parametric property of Hungarian, to be deduced from deeper principles of grammar in future work, is that this language allows both arguments and adverbial adjuncts to be base generated and spelled out lower than their position of semantic interpretation. This yielded a revised account of the o radically free word order alternations internal to the post-verbal field, identifying a proper trigger for the movement operation underlying the permutations in terms of generalized Last Resort.

In investigating apparently free word order alternations and word order flexibility, this monograph, drawing on trends in both non-generative (including functionalist) and in recent generative work, has presented an approach to syntactic structure that shifts as much as possible of the burden of the explanation of word order facts from a fixed hierarchical syntactic template ST of absolute positions and from the postulation of narrow syntactic agreement of abstract features to the particular needs of the individual elements themselves that constitute the sentence and to the interpretations they give rise to. In the main, adopting the basic guidelines of the minimalist research program, these needs are imposed by the semantic and the phonological subsystems of grammar interfacing with syntax by interpreting its output. In broad terms, this work then is effectively a study in the deconstruction of ST, which replaces the mainstream conception of absolute syntactic positions by a notion of relative syntactic position. In other words, rather than defining syntactic structure as fixed and

absolute, syntactic structure is viewed as flexible and relative *ab ovo*, taking aspects of rigidity of word order as the exception rather than the rule.

This shift in perspective allows us to assign a number of requirements imposed by the external interface systems of meaning, and to a lesser extent, of sound, a more central, and occasionally more direct, role than in mainstream alternatives. Though departing from the mainstream implementation in several ways, importantly, this approach is fully in line with the minimalist research guidelines to reduce as much of narrow syntax as possible to syntax-external factors.

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Abbreviations

ECP	Empty Category Principle
FL	Faculty of Language
GB theory	Government and Binding theory
GQ	generalized quantifier
id-focus	identificational focus
iQP	increasing distributive quantifier phrase
LF	Logical Form
phi-features	number, person (and gender) features
PHON	the phonological interpretive subsystem interfacing with syntax
PF	Phonetic Form
P&P	Principles and Parameters
SEM	the semantic interpretive subsystem interfacing with syntax
SS	Surface Structure
ST	(hierarchical) syntactic template (of absolute positions)
TGG	transformational generative grammar
UG	Universal Grammar
UTAH	Uniformity of Theta-Assignment Hypothesis
VM	Verbal Modifier
WCO	Weak Crossover